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Trends in the use of Opioid Agonist Treatment in Western Australia, 2013-2022

Trends in the use of Opioid Agonist Treatment in Western Australia, 2013-2022

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1.   Executive Summary

Opioid agonist treatment (OAT) is one of the main treatments for people with opioid dependence[1]. Involving long-term pharmacotherapy with an opioid agonist or partial agonist, it is well established that OAT reduces non-medical use of opioids, injecting and injecting-related injuries, criminal activity, and overall mortality, particularly overdose mortality[2-5]. The World Health Organization lists both methadone and buprenorphine[6,7] as essential medicines for opioid dependence[8]. In Australia, there are currently four OAT formulations subsidised through the Pharmaceutical Benefit Scheme (PBS), including methadone liquid (PBS listed in 1974), sublingual (SL) buprenorphine (2001), SL buprenorphine-naloxone (2005) and long-acting injectable (LAI) buprenorphine (2019)[9].

LAI formulations of buprenorphine represent a relatively new addition to OAT in Australia[10], having been PBS-listed since September 2019. Depending on the formulation, LAI buprenorphine is administered via weekly[11] or monthly[12,13] subcutaneous injections, providing an alternate OAT option that reduces the frequency of dosing visits compared to oral and sublingual OAT alternatives. It's unclear what impact the introduction of LAI buprenorphine and policy changes in response to the COVID-19 pandemic had on patterns of OAT medicine use.

This technical report describes 10-year trends in the sales of OAT medicines in Western Australia (WA). Aggregate monthly sales were used to estimate the number of OAT clients per month, based on average doses.

Findings

- The estimated number of OAT clients in WA increased by +26% from 2,341 clients in January 2013 to 2,951 clients in December 2022.
- Per capita, WA saw a +13% increase in OAT use from 9.4 OAT clients per 10,000 population in January 2013 to 10.6 per 10,000 in December 2022.
- WA had the second lowest per-capita rate of OAT utilisation of all jurisdictions, after the Northern Territory, from 2013 to 2022.
- Patterns of OAT medicines in WA also changed over this time. There was:
    - a decline (-20%) in clients receiving methadone (2013-2022),

- a 47% increase in clients receiving SL buprenorphine from 2013 to 2019, followed by a decline to the end of 2022, and
- a substantial uptake of LAI buprenorphine following its introduction (16 clients in Sep 2019 to 922 clients in Dec 2022).
- Consequently, the distribution of OAT medicines has shifted in WA:
  - In January 2013, almost three-quarters (72.5%) of OAT clients received methadone with the remainder receiving SL buprenorphine (27.3%).
  - In December 2022, 46.0% of clients received methadone and 54.0% buprenorphine (22.8% SL buprenorphine and 31.2% LAI buprenorphine).
- From 2013 to 2022, the greatest increases in clients receiving OAT were observed in major cities (+35%) whereas decreases were observed in remote and very remote areas.
- Across the decade in WA, increases in clients receiving OAT were observed across all socioeconomic areas, except for the most disadvantaged areas which decreased (-11%).
- Almost all (99%) OAT in WA was accessed through community pharmacies, until late 2019, when access from non-community pharmacy settings increased. By the end of the study (December 2022) community pharmacies accounted for 90% of OAT in WA, clinics and medical centres 6%, and other (incl. prisons) 3%.
- At the beginning of the study, the majority (73%) of clients at community pharmacy received methadone and by the end of the study approximately equal number of clients received buprenorphine (24% LAI buprenorphine, 25% SL buprenorphine) and methadone (51%). Almost all clients attending other settings received LAI buprenorphine.

Conclusions

The pattern of OAT medicines used in WA changed over time, with the most common OAT medicine being methadone in 2013 and buprenorphine in 2022, with LAI buprenorphine surpassing SL buprenorphine as the most common buprenorphine formulation. There was a slight increase in access to OAT in some settings outside community pharmacy – coinciding with the introduction of LAI buprenorphine, the COVID-19 pandemic, and related interim OAT guidance and policies. Of note, there was a small decline in access from remote and

disadvantaged areas over the decade. Future research should establish how these changes impact clinical outcomes for people with opioid dependence.
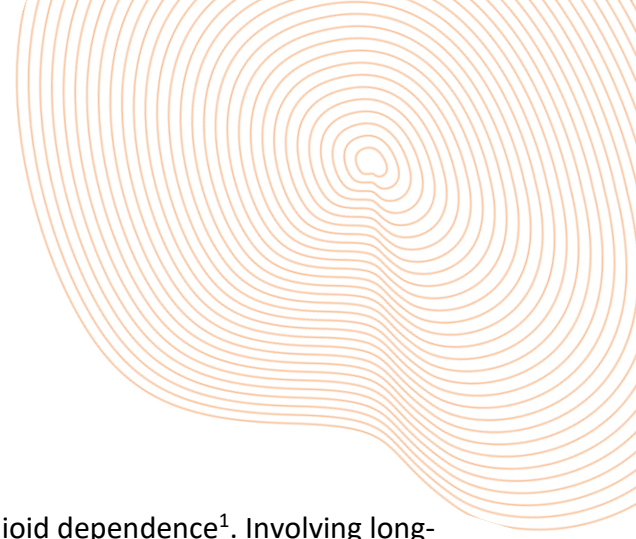
2. Background & Methods

2.1. Background

Opioid agonist treatment (OAT) is a first-line treatment for opioid dependence[1]. Involving long-term pharmacotherapy with an opioid agonist or partial agonist, it is well established that OAT reduces non-medical use of opioids and related harms [3]. For example, there is strong evidence to show that OAT is effective at reducing injecting and injection related injuries, blood-borne viral spread, overdoses and overall mortality[2-5], as well as improving physical health, social functioning and economic productivity[1]. Methadone and buprenorphine are both listed by the World Health Organization as essential medicines for this indication[8]. In Australia, four formulations of OAT are approved by the Therapeutics Goods Administration (TGA) and subsidised through the Pharmaceutical Benefit Scheme (PBS) for the treatment of opioid dependence. These include methadone liquid (PBS listed in 1974), sublingual (SL) buprenorphine (2001), SL buprenorphine-naloxone (2005: tablets, 2011: films) and long acting injection (LAI) buprenorphine (September 2019)[9].

LAI formulations of buprenorphine have recently become available for the treatment of opioid dependence[10], having been listed on the PBS since September 2019. Depending on the formulation LAI buprenorphine is administered via weekly[11] or monthly[12,13] subcutaneous injections, providing an alternate OAT option to daily methadone and SL buprenorphine, that reduces the frequency of dosing visits and increases flexibility[14,15]. LAI buprenorphine may offer a number of benefits including increased quality of life, employment, and treatment satisfaction[16], however, the shift to monthly dosing may result in unintended consequences as well[17-19]. In Australia, the roll-out of LAI buprenorphine was stepped up during the COVID-19 pandemic in an effort to reduce face-to-face interactions and the frequency of visits by OAT clients to health services. National interim guidance developed by professional and consumer groups also recommended increasing the number of take-away doses, greater use of telehealth appointments, and home delivery, including third party collections for clients in quarantine[20]. These recommendations addressed logistical barriers to OAT engagement, including the travel burden

associated with attending services[21]. Although their implementation was not mandated, and varied across jurisdictions, understanding the extent to which these changes in guidance impacted access to OAT will help determine the adaptability of the program to support clients.

Each year, a summary of medicines used on snapshot day/s in OAT programs around Australia are published.[22] Intermittent reporting, such as this, limits a nuanced understanding of changes to the profile of individual medicines over time and changes to overall utilisation in different settings (e.g., community vs. prison, regional v. remote). Monthly sales data provide a novel means to examine longitudinal trends of OAT.

This report aims to describe sales of OAT medicines in Western Australia (WA) over time and to consider factors that may have affected patterns of access.

2.2. Aims

This report aims to:

1. Examine trends in the estimated number of clients on all OAT medicines in WA between 2013 and 2022, and

2. Examine variation in the estimated number of OAT clients by jurisdiction, remoteness, socio-economic status and setting.

2.3. Methods

2.3.1.   Study design and time period

This is a descriptive study of trends in the sales of OAT medicines (methadone, SL buprenorphine, SL buprenorphine-naloxone and LAI buprenorphine) in WA from January 2013 to December 2022.

2.3.2.   Data source

Data was provided by IQVIA (iqvia.com) on sales of medicines by pharmaceutical wholesalers and manufacturers to community pharmacies, hospitals and other providers, including prisons. IQVIA claims around 97% coverage of the Australian community pharmacy and hospital settings[23]. Data on all formulations of OAT medicines sold in WA between January 2013 and December 2022 were included. Due to the legal requirements for secure storage and monitoring of OAT medicines in pharmacies, the number of packs sold over a 12-month period should closely approximate the number of medicines used by clients in the WA OAT Program.

2.3.3.   Medicines

Available OAT medicines, by formulation and strength, are summarised in Table 1. Formulations of methadone and buprenorphine used only for opioid dependence were included. In the rare event that methadone is used for analgesia, methadone tablets (which can be crushed) are generally preferred over liquid, in both the community and hospital setting. Methadone liquid 200mL, indicated for both analgesia and opioid dependence in Australia, was included because most use was assumed to be for opioid dependence. Sales of LAI buprenorphine were disaggregated into five groups relative to strength and injection frequency - weekly low and high strengths, and monthly low, medium and high strengths (see 'LAIB Group' in Table 1). These groups were selected to provide high level trends without identifying individual brands.

Table 1. Medicines available in the Australian opioid agonist treatment programme.					
Active Ingredient	**Form**	**Brand name**	**Strength (mg)**	**LAIB[†] Group**	**Entry to market[‡]**
Methadone	Oral (liquid)	Biodone Forte, Methadone Syrup	5mg / mL	N/A	1974[24]
Buprenorphine	Sublingual tablet	Subutex	0.4, 2, 8	N/A	2001[25]
Buprenorphine / naloxone	Sublingual tablet / film	Suboxone	2/0.5, 8/2	N/A	2005: Tablets[26] 2011: Films[27]
Buprenorphine	Long-acting injection	Buvidal weekly	8, 16	Weekly LAIB - low	September 2019[24]
Buprenorphine	Long-acting injection	Buvidal weekly	24, 32	Weekly LAIB - high	September 2019[24]
Buprenorphine	Long-acting injection	Buvidal monthly	64	Monthly LAIB - low	September 2019[24]
Buprenorphine	Long-acting injection	Buvidal monthly	96, 128	Monthly LAIB - med	September 2019[24]
Buprenorphine	Long-acting injection	Buvidal monthly	160	Monthly LAIB - high	May 2022[24]
Buprenorphine	Long-acting injection	Sublocade	100	Monthly LAIB - low	May 2020[24]
Buprenorphine	Long-acting injection	Sublocade	300	Monthly LAIB - high	May 2020[24]

[†]LAIB: Long-acting injection buprenorphine, [‡] Entry to market based on PBS listing as part of the Australian Opioid Dependence Treatment Program

2.3.4.   OAT clients per month

Describing OAT utilisation based solely on packs sold does not enable a like-for-like comparison between different medicines. In some cases, one pack may be used to treat one or multiple clients - for example, one pack of LAI buprenorphine treats one client over 28 days, whereas one pack of methadone syrup (1 L) may treat several clients. Oral morphine equivalents (OME) were
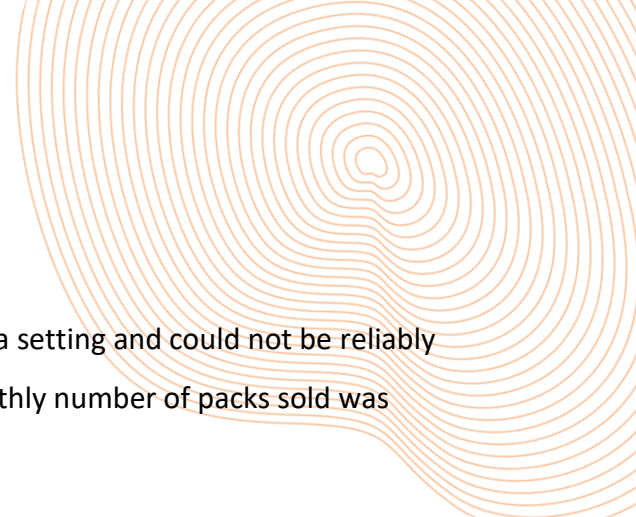
considered less relevant for comparing OAT in a non-analgesia setting and could not be reliably estimated for LAI buprenorphine. For these reasons, the monthly number of packs sold was converted into an estimate of OAT clients per month.

For SL buprenorphine and methadone formulations, OAT clients per month were estimated by summing the total milligrams (mg) contained in the packs sold that month and dividing by the average dose (mg) to treat a single person for 28 days e.g.,

$$\text{OAT clients per month} = \frac{[\ \text{mg per pack} \quad x \quad \text{Total number of packs sold that month}\ ]}{[\ \text{Average daily dose (mg) for a single person} \quad x \quad 28\ \text{days}\ ]}$$

Average doses were estimated from previous research (see Table 2). For LAI buprenorphine formulations, estimates of clients per month were based on the number of packs (injections) sold. Specifically, one pack of weekly and one pack of monthly LAI buprenorphine were assumed to treat 0.25 and 1 client, respectively, over a 28-day period, aligning with the recommended dosing schedules[11-13]. A chart review of three Australian OAT providers verified these dose estimates aligned with real-world LAI buprenorphine dosing schedules[28]. To account for small fluctuations in sales data, reflecting the ordering behaviour (such as stockpiling) of pharmacies rather than actual fluctuations in OAT client numbers, three-month moving averages are presented.

Table 2. Average doses for OAT medicines; data pooled from recent Australian cohort studies.

Measure	Methadone liquid		Sublingual Buprenorphine	
	Pooled estimate (95% CI)	Sources	Pooled estimate (95% CI)	Sources
Mean dose (mg/day)	74.06 (69.44, 78.69)	29,30	16.00 (14.39, 17.61)	30
Median dose (mg/day)	75 (47,75)	30-34	13 (13, 16)	30-35

Where applicable $I^2 = 0.0$.

2.3.5.   Geographical information and setting

Monthly OAT utilisation was summarised overall and disaggregated by jurisdiction, remoteness, socioeconomic status, and setting. The Australian jurisdictions includes six states (New South Wales (NSW), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC), WA), and two
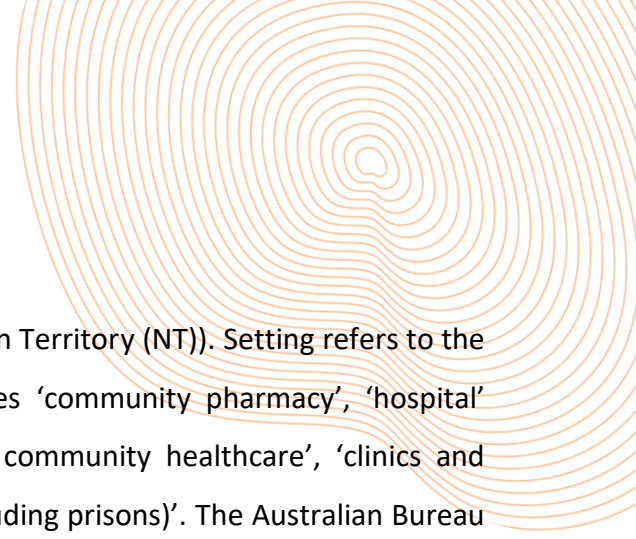
territories (Australian Capital Territory (ACT) and the Northern Territory (NT)). Setting refers to the provider type which purchased the medicines, and includes 'community pharmacy', 'hospital' including outpatient drug and alcohol services, 'aged and community healthcare', 'clinics and medical centres' including general practices, and 'other (including prisons)'. The Australian Bureau of Statistics (ABS) mapping of Postcode 2017 was used to map sales to the Australian Statistical Geography Standard (ASGS) Remoteness Areas 2016 data[36] and to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD) 2016 data[37] (see Appendix 6.1 Mapping to postcode). Australian remoteness categories include 'Major Cities', 'Inner Regional', 'Outer Regional', 'Remote' and 'Very Remote'. IRSAD summarises information about the economic and social conditions of people and households within an area, with lower quintiles indicating relatively greater disadvantage and higher quintiles indicating relatively greater advantage.

2.3.6. Statistical Analysis

Descriptive statistics and data visualisations were used to describe trends over time, and by OAT medicine, jurisdiction, remoteness, socioeconomic status and setting. The estimated number of clients receiving OAT medicines each month, overall and by individual medicines, were evaluated as a count standardised against population size and/or as a proportion (%) of the total number of OAT clients that month. Per capita estimates were based on the estimated residential population at June 30 each year, provided by the ABS[38], overall and by jurisdiction.

Analyses were conducted using SAS Enterprise Guide 9.4 (SAS Institute Inc., Cary, NC, USA) and Microsoft Excel for Microsoft 365 (Microsoft, Seattle, WA, USA).

<u>Ethics approval</u>

Ethics approval was not required as data from IQVIA were received in deidentified aggregated form.
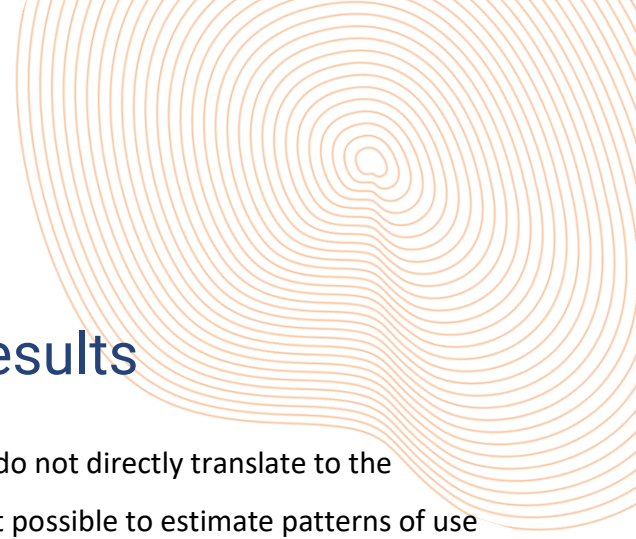
3. Guide to interpretation of results

- It is important to acknowledge that the amounts sold do not directly translate to the amounts dispensed or used. For this reason, it was not possible to estimate patterns of use at the client level nor determine the exact number of clients engaged in OAT in each month.

- The approach used in estimating the number of clients receiving OAT per month assumes that real-world OAT doses – and the factors known to influence dose, including disorder severity - have remained stable over time and across different settings. The parameters used to derive these estimates were informed by the literature and have not been validated against population-level data on OAT doses from Australia.

- The estimates assume clients are retained in OAT over the full 28-day interval; where this is not the case, the number of clients accessing OAT at least once a month would be higher.

- This report complements the National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD), which provide a national overview of OAT pharmacotherapies used in Australia on snapshot day/s by state and territory health departments[22]. Where comparisons with NOPSAD show varying trends, these may be explained by differences in client ascertainment and changes in the patterns of OAT retention[39] during the study period.

- Furthermore, IQVIA coverage is not 100% and may have improved over time, which could lead to an underestimate of OAT clients in earlier years of the study.

- Capture of OAT sales to settings other than community pharmacy and hospital (e.g., prisons, clinics and medical centres) may be incomplete, leading to an underestimate of the number of clients accessing OAT in these settings.

- As the weekly low dose LAI buprenorphine formulation can be used for top-up or supplemental dosing, inclusion of these formulations may have resulted in a slight overestimate of the number of clients.

- The geographic information provided by IQVIA for non-community pharmacy/hospital settings was less granular (PHN level) so there may be misclassification of remoteness and socioeconomic categories in these settings.

- The socioeconomic and remoteness findings reflect where OAT was received rather than where OAT clients reside, as clients may have travelled to different areas to receive OAT.

4.   Findings

4.1.   OAT utilisation by state/territory

Across the decade, the estimated number of clients receiving OAT each month in WA increased by 26%, from 2,341 clients in January 2013 to 2,951 clients in December 2022 (Figure 1A, Table A1). After accounting for population size, there was a +13% increase in OAT use in WA, from 9.4 OAT clients per 10,000 population in January 2013 to 10.6 per 10,000 in December 2022 (Figure 1B). In December 2022, the number of OAT clients per capita per month in WA ranged from around two-thirds to half that of SA (9-10 per 10,000 population vs 15-18 per 10,000) (Figure 1B).

Figure 1. Number of OAT clients (A), and OAT clients per 10,000 population (B), per month by Australian state/territory (2013-2022).
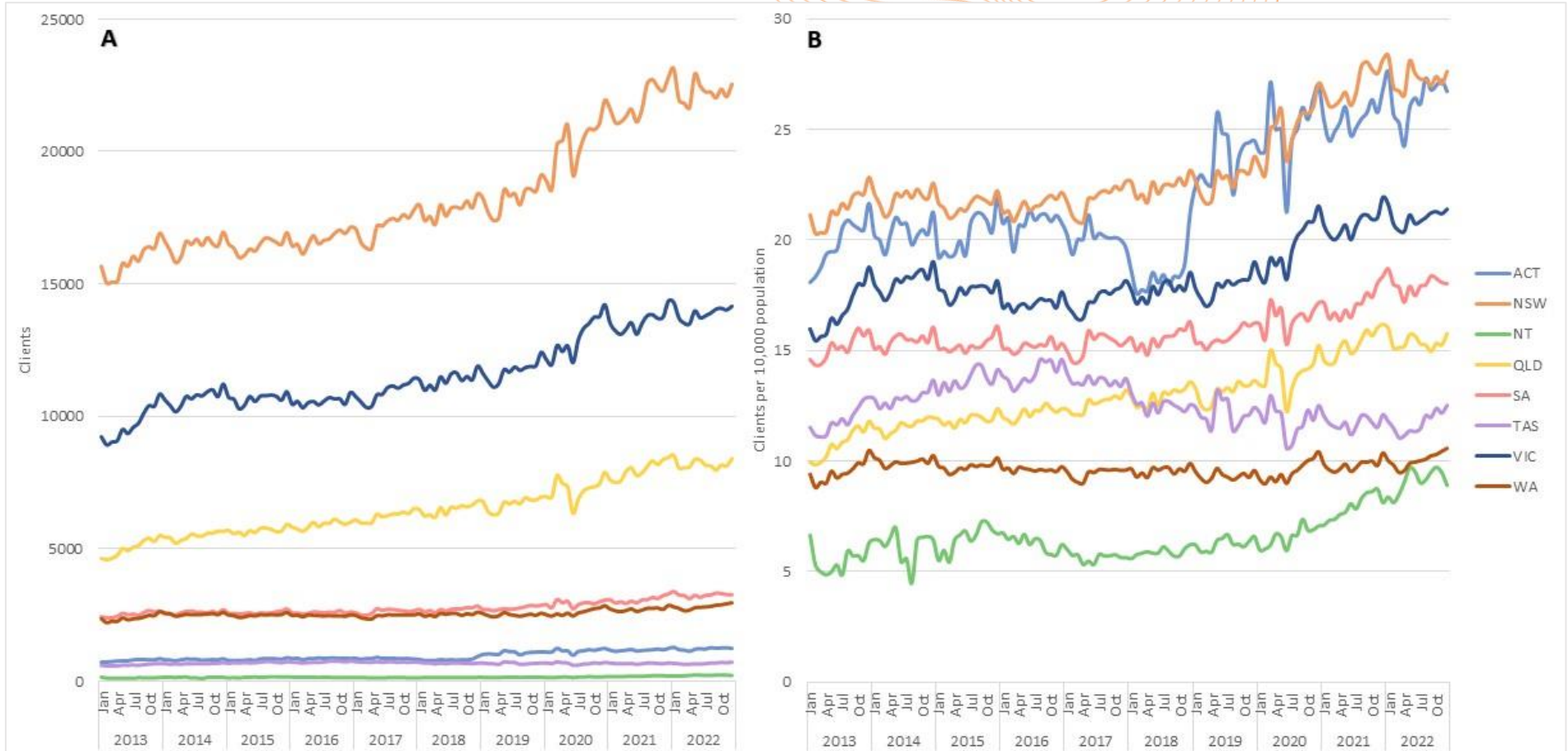
ACT: Australian Capital Territory, NSW: New South Wales, NT: Northern Territories, QLD: Queensland, SA: South Australia, TAS: Tasmania, VIC: Victoria, WA: Western Australia
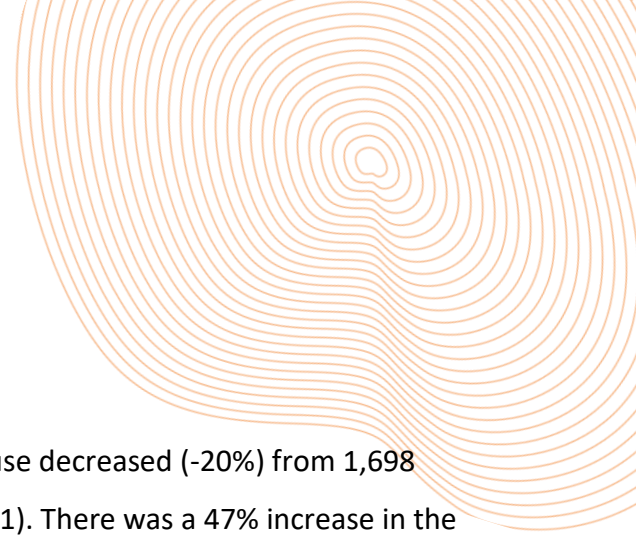
4.2. OAT utilisation in WA

4.2.1. All OAT medicines

Patterns of OAT have changed over time in WA. Methadone use decreased (-20%) from 1,698 clients in 2013 to 1,358 in December 2022 (Figure 2A, Table A1). There was a 47% increase in the estimated number of clients receiving SL buprenorphine between January 2013 (643 clients) and December 2019 (926 clients), followed by a 32.3% decrease by December 2022 (627 clients). Following its introduction to the market, there was a substantial uptake of LAI buprenorphine, from 16 clients in September 2019 to 922 clients in December 2022.

Subsequently, the distribution of medicines in the WA OAT program evolved over time (Figure 2B). In January 2013, nearly three-quarters (72.5%) of the estimated number of OAT clients in WA received methadone with the remainder receiving SL buprenorphine (27.3%). In December 2022, 46.0% of clients received methadone, 22.8% SL buprenorphine, and 31.2% LAI buprenorphine (Figure 2B, Table A1).

4.2.2. LAI buprenorphine

Since the introduction of LAI buprenorphine, the majority of use was for monthly rather than weekly formulations (Figure 3, Table A2). The formulations in the 'Monthly LAIB – medium' group were used most commonly, followed by 'Monthly LAIB – low', with 'Monthly LAIB – high' used less frequently. From December 2019 to December 2022, the uptake of formulations in the 'Monthly LAIB – medium' group increased from 21 to 473 clients and 'Monthly LAIB – low' from 8 to 318 clients (Figure 3, Table A2).

Figure 2. Cumulative number of OAT clients (A) and proportion of total OAT clients (B), per month by medicine (WA, 2013-2022).
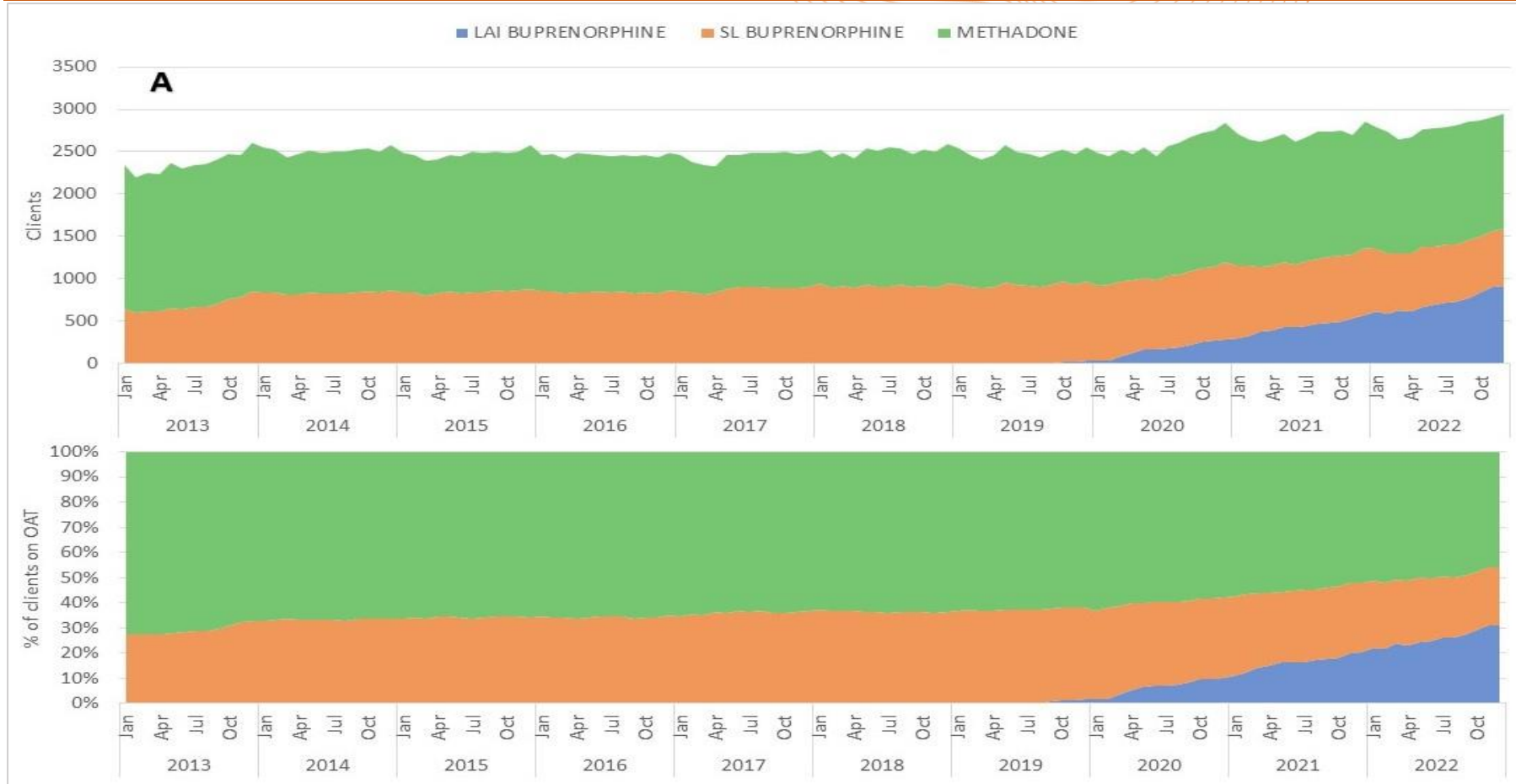
LAI: Long Acting Injection, OAT: Opioid Agonist Treatment, SL: Sublingual

Figure 3. Number of OAT clients by LAI buprenorphine (LAIB) group* (WA, 2019-2022).
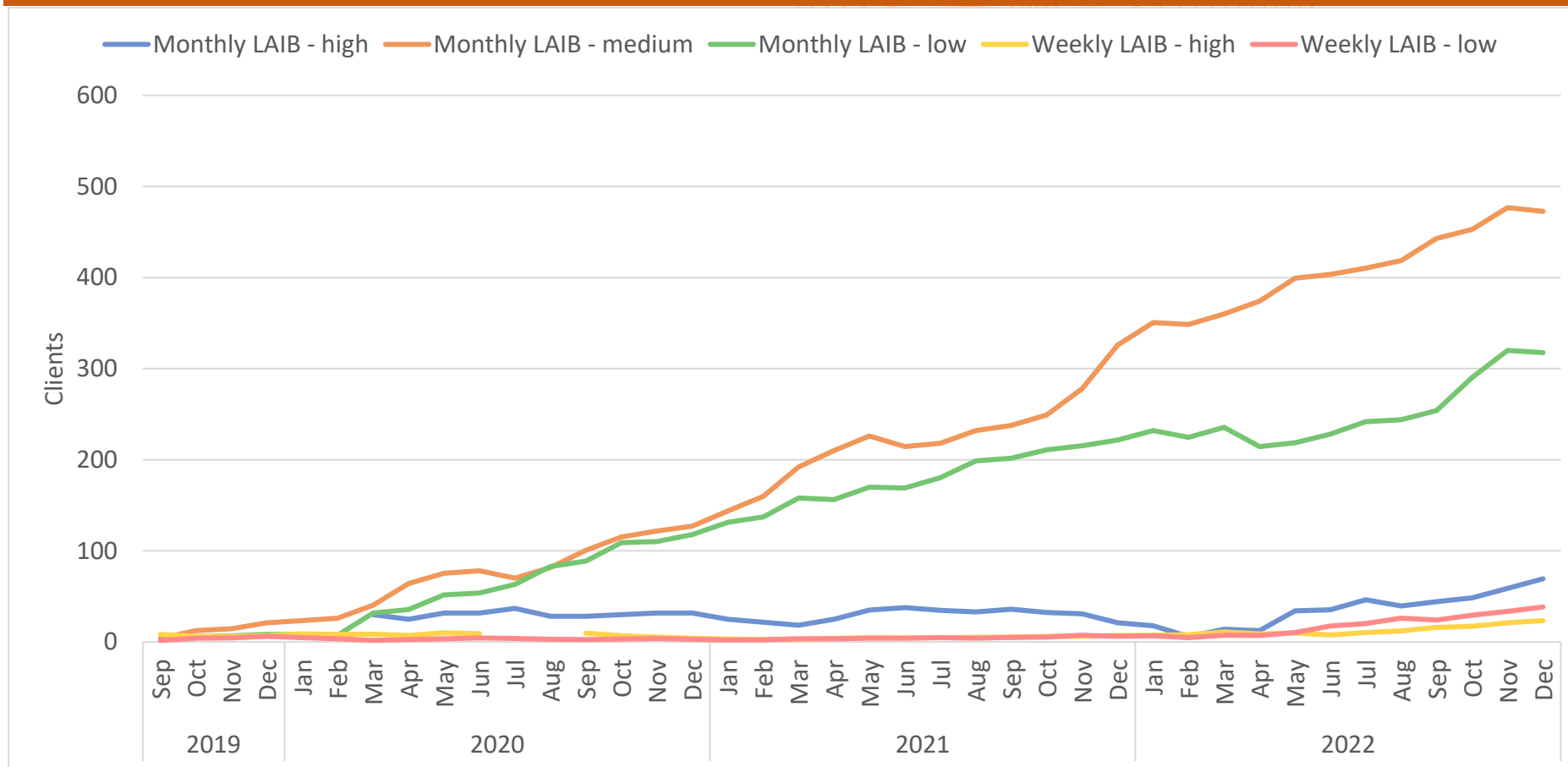
* LAIB groups are defined in Table 1
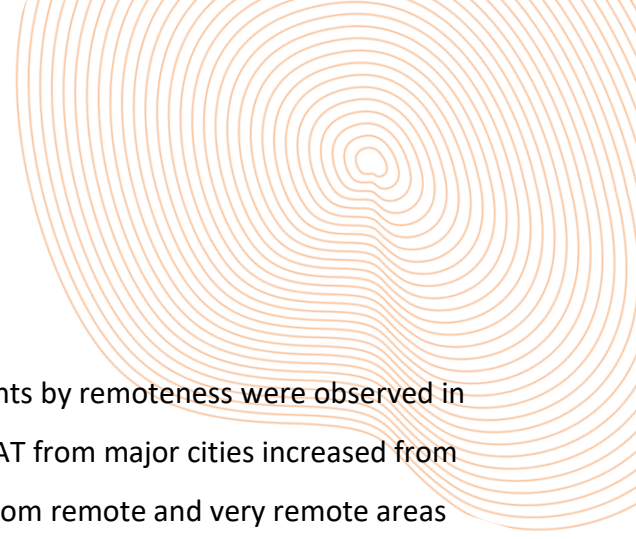
4.2.1. Remoteness

Over the study period, changes in the distribution of OAT clients by remoteness were observed in WA. From 2013 to 2022 the proportion of clients accessing OAT from major cities increased from 80 to 85%, whereas the proportion of clients accessing OAT from remote and very remote areas decreased from 7.4% to 4.7%, (Table A3). Over the decade, the estimated number of OAT clients increased in major cities and inner regional areas but decreased in remote areas (Figure 4). From 2013 to 2022, the greatest increases in estimated number of OAT clients were observed in major cities (1869 to 2,514 clients: +35%), whereas decreases were observed in remote (85 to 63 clients: -26%) and very remote (90 to 75 clients: -16%) areas (Figure 4, Table A3).

4.2.2. Socioeconomic status (IRSAD)

Across the decade in WA, rates of OAT use increased across all IRSAD quintiles, except for the most disadvantaged quintile which decreased by 11% (353 to 313 clients; Figure 5, Table A4). Consequently, the distribution of OAT clients by socioeconomic status changed. From 2013 to 2022, the proportion of clients receiving OAT in the most advantaged areas increased from 29.6% to 34.2%, and the most disadvantaged areas decreased from 15.1% to 10.6%. (Table A4).

Figure 4. Number of OAT clients per month by remoteness (WA, 2013-2022).
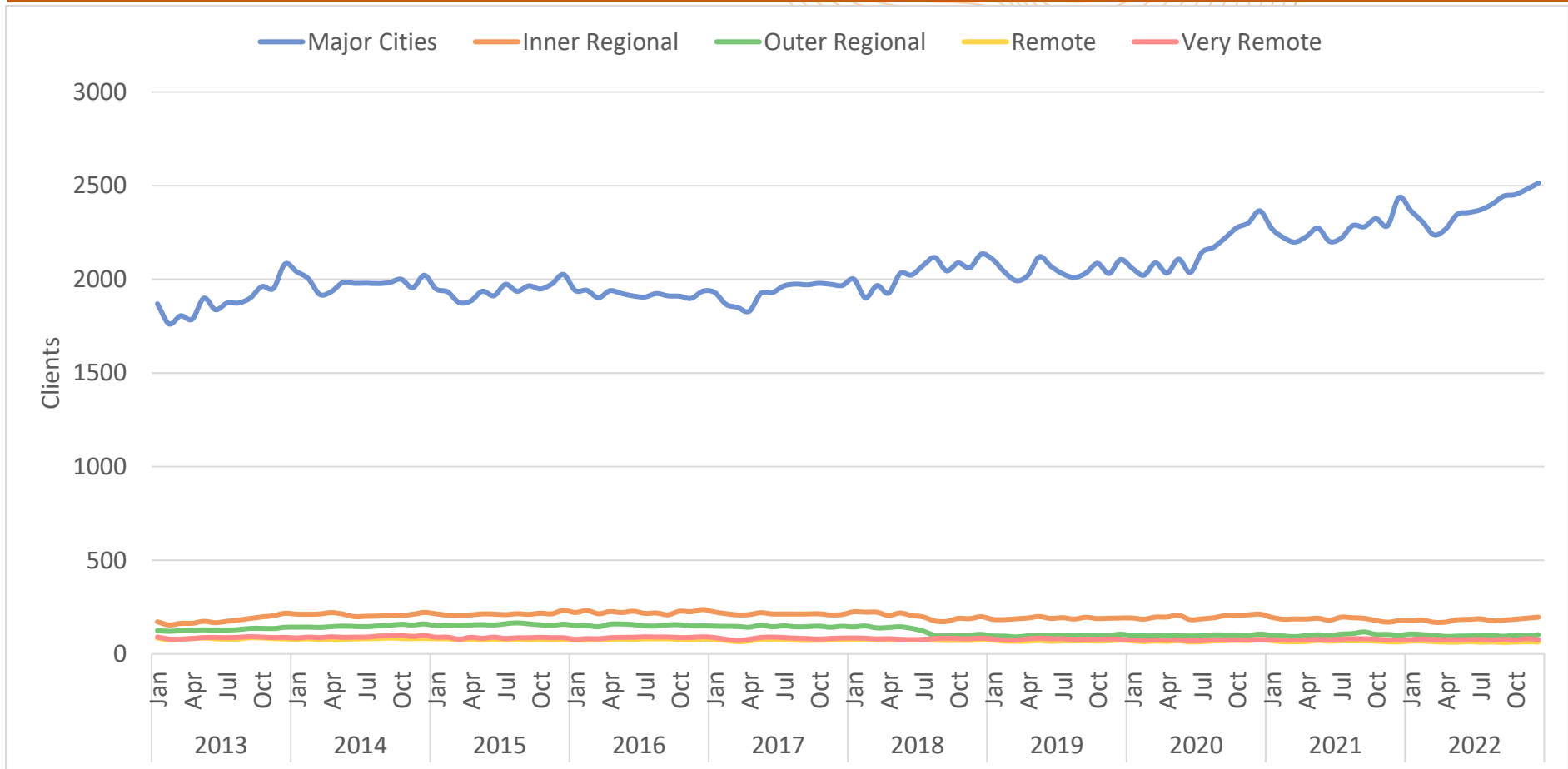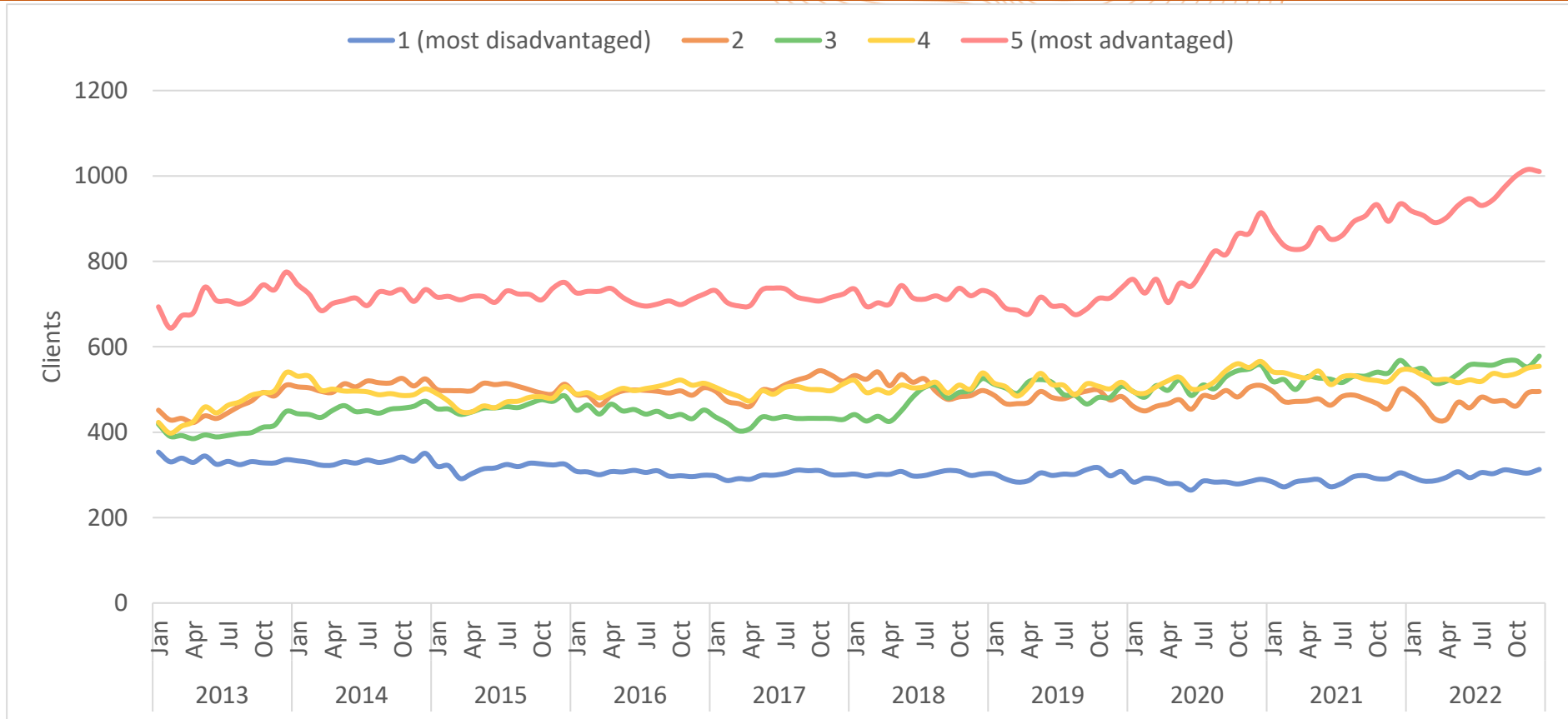
IRSAD: Index of Relative Socioeconomic Advantage and Disadvantage

4.2.3. Setting

In WA, trends in the distribution of OAT utilisation by setting remained relatively consistent between 2013 and 2019, with some small changes observed from 2020 to 2022 (Figure 6). Very few sales in non-community pharmacy settings in WA were identified in this study. Almost all (99%) OAT in WA was accessed through community pharmacies, until late 2019, when access from non-community pharmacy settings increased. The estimated number of clients accessing OAT each month in community pharmacy increased by 14% from 2,325 in January 2013 to 2,643 in December 2022 (Figure 6, Table A5). The estimated number of clients accessing OAT in clinical and medical centres remained relatively stable from 2013 to 2019/2020, at 0-10 clients per month, before increasing steadily to 190 clients in December 2022 (Figure 6, Table A5). By the end of the study (December 2022) community pharmacies accounted for 90% of OAT in WA, clinics and medical centres 6%, and other (incl. prisons) 3% (Table A5).

The distribution of medicines in the WA OAT program varied by setting (Figure 7, Table A6). The majority of clients accessing OAT in community pharmacy each month received methadone whereas, since 2020, the vast majority of clients accessing OAT in non-community pharmacy settings each month received LAI buprenorphine. In WA, by the end of the study (December 2022):

- 2,643 clients accessed OAT from community pharmacy, of whom 1,344 (51.8%) received methadone, 662 (25.0%) SL buprenorphine and 638 (24.1%) LAI buprenorphine;
- 190 clients accessed OAT from clinics and medical centres, of whom almost all (97%) received LAI buprenorphine; and
- 100 clients received OAT in prison, of whom 97% received LAI buprenorphine (Figure 7, Table A6).

Figure 6. Number of OAT clients per month, by setting (WA, 2013-2022).
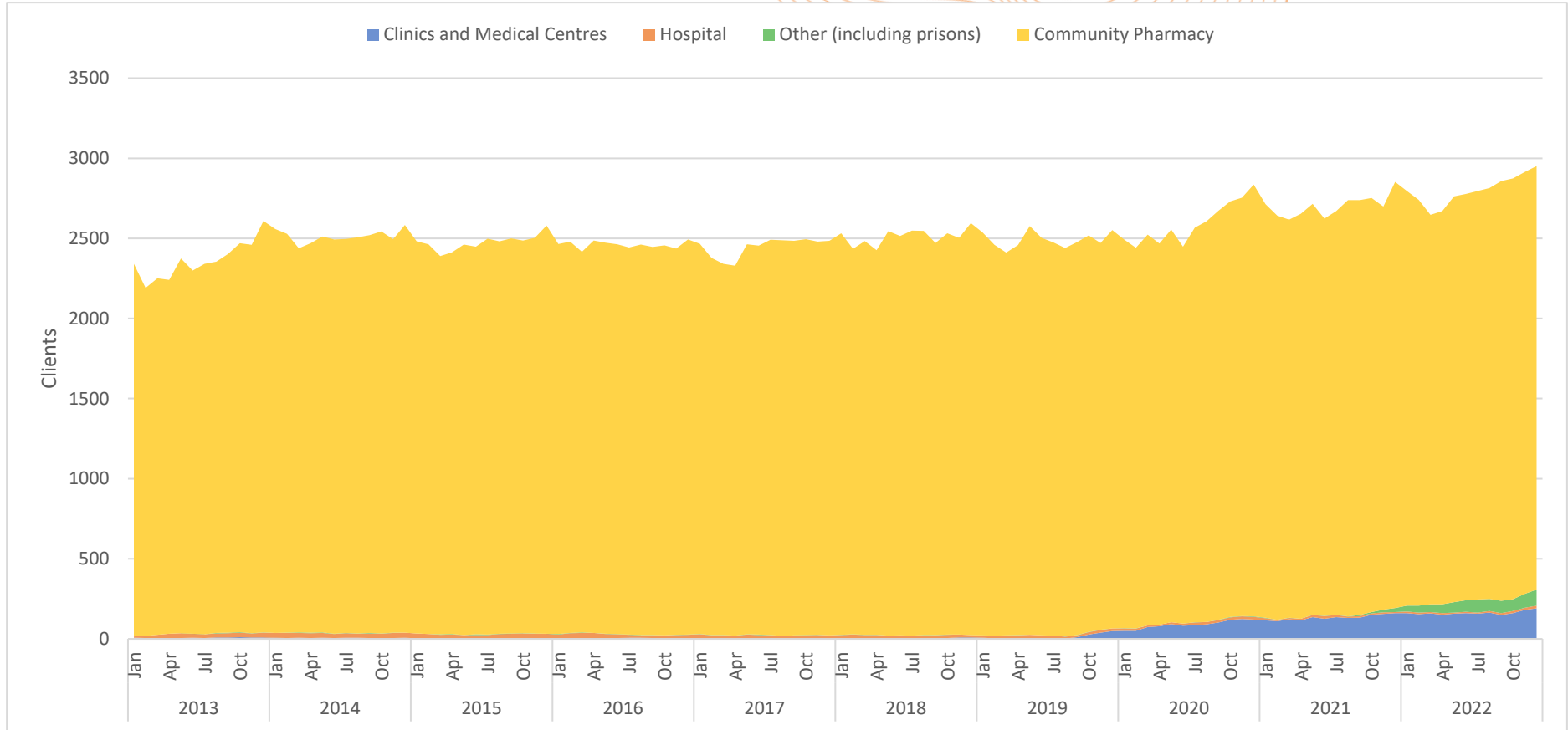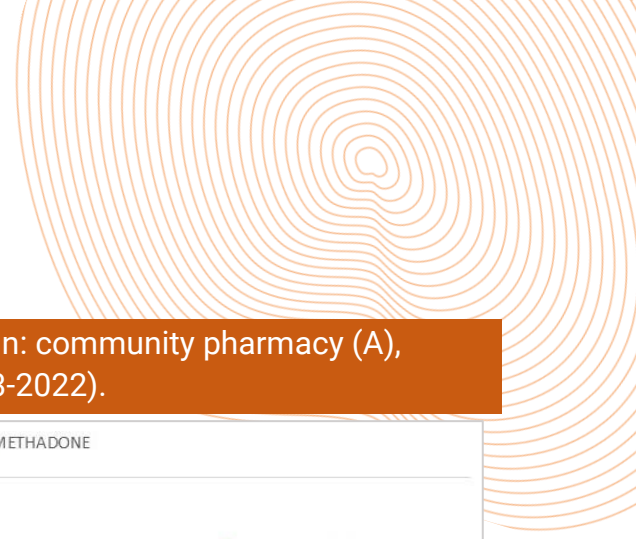
Figure 7. Number of OAT clients per month by medicine in: community pharmacy (A), hospitals (B), and other (including prisons) (C) (WA, 2013-2022).
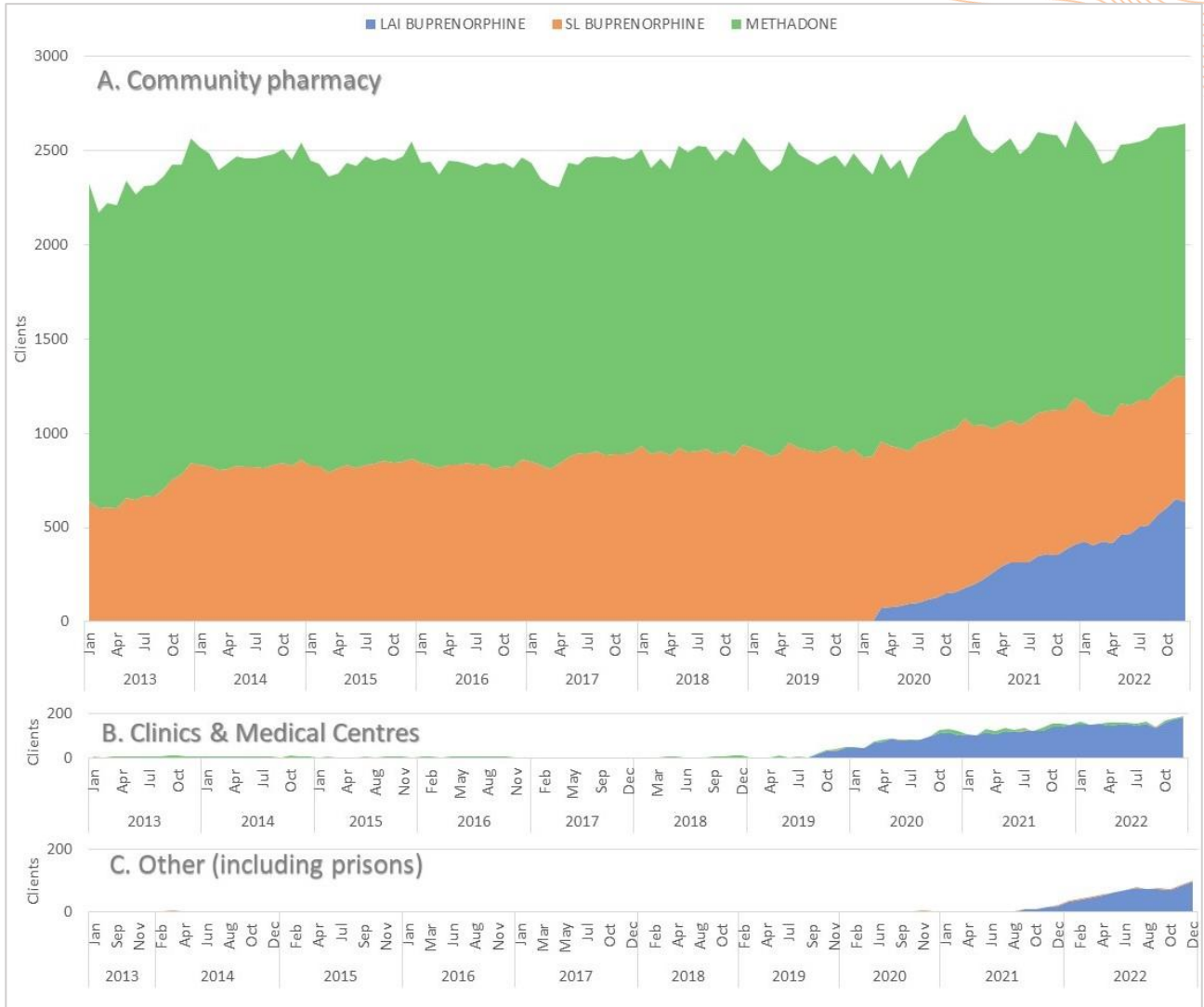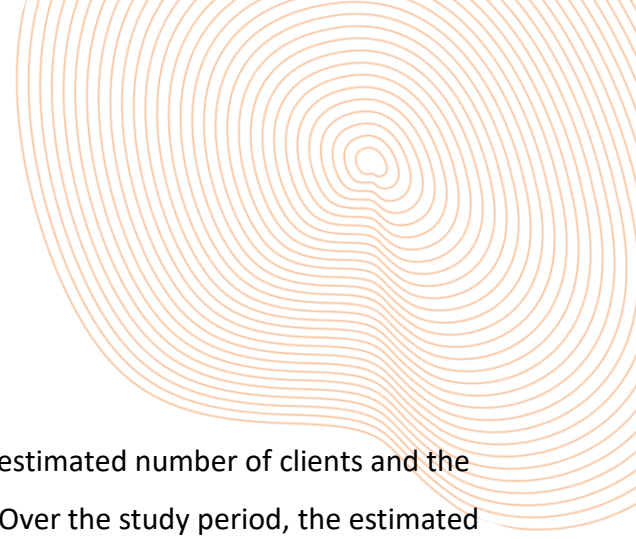
5. Discussion

This report used monthly sales data to evaluate trends in the estimated number of clients and the types of OAT medicines used in WA between 2013 and 2022. Over the study period, the estimated number of OAT clients in WA increased by +26%, however, after adjusting for population growth the per-capita number of OAT clients decreased by -17%. The pattern of OAT medicines used in WA changed over time, with the most common OAT medicine being methadone in 2013 and buprenorphine in 2022. Over the decade, these findings suggest the proportion of clients receiving OAT in major cities and the most advantaged areas increased, whereas the proportion of clients receiving OAT from remote/very remote areas and the most disadvantaged areas decreased. Almost all (99%) OAT in WA was accessed through community pharmacies, until late 2019, when access from non-community pharmacy settings increased – coinciding with the introduction of LAI buprenorphine, the COVID-19 pandemic, and related interim OAT guidance and policies. By the end of the study (December 2022) community pharmacies accounted for 90% of OAT in WA, clinics and medical centres 6%, and other (incl. prisons) 3%.

Importantly this report demonstrates a substantial increase in the use of LAI buprenorphine for OAT in WA. Between September 2019 (the month LAI buprenorphine was PBS-listed) and December 2022, the estimated number of clients accessing LAI buprenorphine increased, eventually accounting for just under a third of all WA OAT clients, with LAI buprenorphine now surpassing SL buprenorphine as the most common buprenorphine formulation for OAT in WA. By the end of the study period (2022), just over half (51%) of clients in community pharmacy received methadone whereas almost all (97%) OAT clients at clinics and medical 'other' settings (including prisons) received LAI buprenorphine. As discussed previously, scale-up of LAI buprenorphine was accelerated during the COVID-19 pandemic in an effort to reduce exposure to infection, and help adhere with social distancing[20].

With this significant uptake of LAI buprenorphine, there has been a shift in the distribution of OAT, with the majority (54%) of clients in WA estimated to be receiving buprenorphine (incl. SL and LAI buprenorphine formulations) in the most recent year of data capture. The estimated proportion of
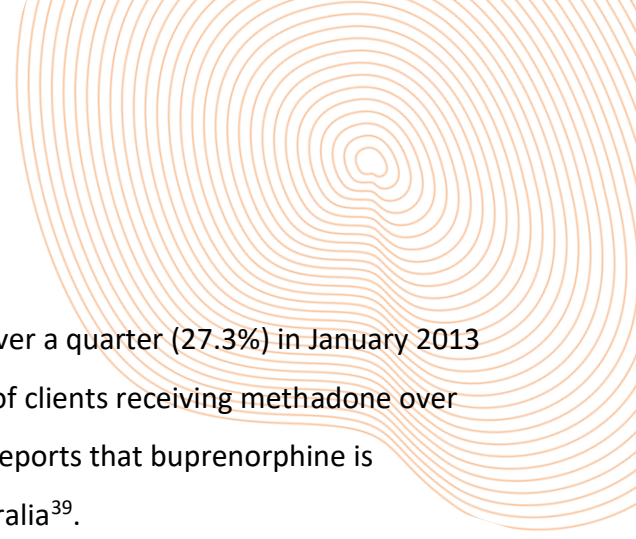
all OAT clients receiving buprenorphine increased from just over a quarter (27.3%) in January 2013 to over half in December 2022. Given the estimated number of clients receiving methadone over the study period decreased, this finding aligns with previous reports that buprenorphine is increasingly the medicine most OAT clients initiate on in Australia[39].

The trends seen in this report largely align with the annual summaries from the NOPSAD collection, however the client estimates in this report are somewhat lower[22]. At the beginning of the study period, the estimated number of OAT clients in WA in this report was 30% lower than the figure quoted by NOPSAD (June 2013: 2,299 clients vs 3,286 clients in NOPSAD) and by the end of the study period this difference had reduced to 6% lower (June 2022: 2,778 clients vs 2,968 clients in NOPSAD). This report showed conflicting trends in per-capita OAT use over the study period, compared with NOPSAD. From 2013 to 2022, data indicates per-capita OAT use in WA increased by +13% in this report (from 9.4 to 10.6 OAT clients per 10,000 population) whereas, per-capita OAT use decreased by -15% (from 13 to 11 OAT clients per 10,000 population) according to the NOPSAD collection[22]. It's important to note, the proportions of OAT clients receiving LAI buprenorphine are higher in this report, than in NOPSAD (June 2021: 17.7% vs 11.0%; June 2022: 24.9% vs 18.3%). These differences may be explained by differences in the methods used for client ascertainment and changes in the patterns of OAT retention during the study period[39]. NOPSAD collects data on the total number of clients receiving OAT in WA over the month of June, whereas the client estimates in this report are based on a conversion of packs sold into clients treated over a month, with the assumption that clients are retained in OAT over the full 28-day interval. As some attrition from OAT is expected this report probably underestimates the total number of clients accessing OAT over the month, however, if OAT retention rates have improved over time[39] the potential for this source of underestimation would have diminished over the study time period.

In conclusion, the findings in this report suggest that in WA, changes in service organisation and delivery during COVID, as well as the introduction of LAI buprenorphine, improved access to OAT for people with opioid dependence, in settings other than community pharmacy, major cities and in the most advantaged areas. It is yet to be determined if changes to the patterns of OAT
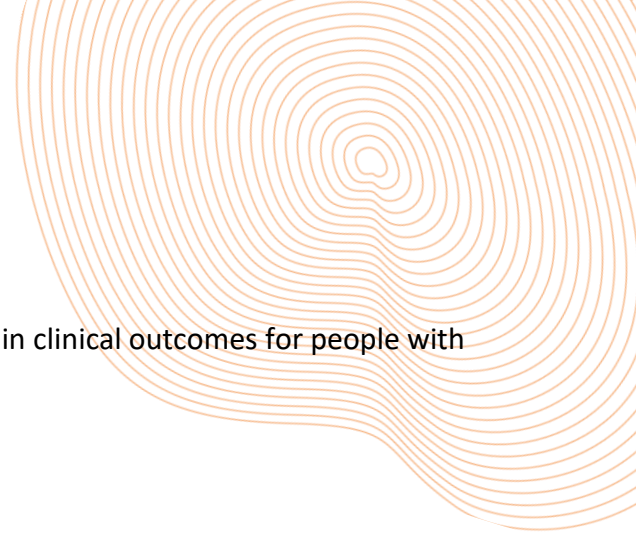
medicines observed in this report is associated with a change in clinical outcomes for people with opioid dependence.

6. Appendices

6.1. Mapping to postcodes

Data on sales to community pharmacy and hospitals were provided in 'bricks', which are geographic boundaries developed by IQVIA containing clusters of pharmacies, for medicine sales and distribution purposes across Australia. Data on sales to all other settings were provided at the Primary Health Network (PHN) level. Sales bricks and PHNs were mapped to postcodes.

6.2. Appendix Tables

Table A1. Estimated number and proportion of OAT clients per month (WA, 2013-2022)

Time period	LAI Buprenorphine		Methadone		SL Buprenorphine		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
2013								
January			1698	72.5	643	27.5	2341	100
February			1585	72.3	606	27.7	2192	100
March			1637	72.7	614	27.3	2250	100
April			1630	72.7	611	27.3	2241	100
May			1712	72.1	663	27.9	2375	100
June			1649	71.7	650	28.3	2299	100
July			1664	71.1	676	28.9	2340	100
August			1679	71.4	674	28.6	2353	100
September			1692	70.4	712	29.6	2404	100
October			1702	68.9	768	31.1	2470	100
November			1666	67.7	793	32.3	2460	100
December			1755	67.3	854	32.7	2609	100
2014								
January			1717	67.1	842	32.9	2559	100
February			1690	66.9	838	33.2	2528	100
March			1621	66.5	816	33.5	2437	100
April			1650	66.8	819	33.2	2469	100
May			1672	66.6	839	33.4	2511	100
June			1664	66.8	828	33.2	2493	100
July			1667	66.8	829	33.2	2496	100
August			1682	67.1	824	32.9	2506	100
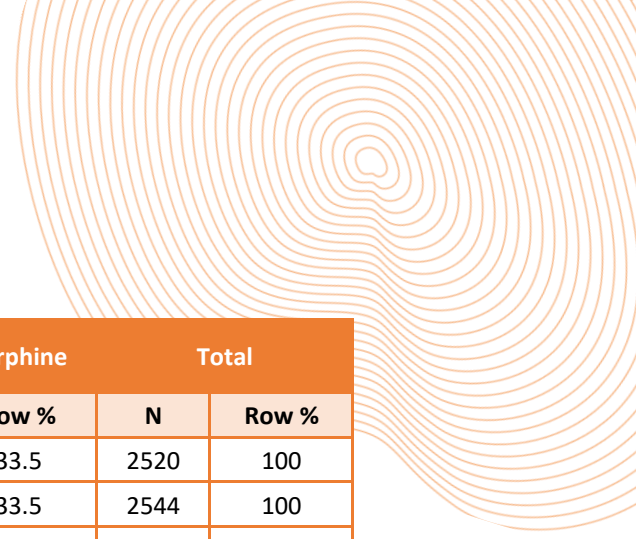
Time period	LAI Buprenorphine		Methadone		SL Buprenorphine		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
September			1675	66.5	845	33.5	2520	100
October			1692	66.5	852	33.5	2544	100
November			1658	66.4	837	33.6	2495	100
December			1711	66.2	872	33.8	2583	100
2015								
January			1641	66.1	841	33.9	2482	100
February			1626	66.0	837	34.0	2464	100
March			1585	66.4	804	33.6	2389	100
April			1584	65.6	829	34.4	2413	100
May			1616	65.6	848	34.4	2464	100
June			1615	66.0	831	34.0	2446	100
July			1656	66.2	844	33.7	2500	100
August			1635	65.9	846	34.1	2481	100
September			1631	65.3	868	34.7	2498	100
October			1629	65.5	857	34.5	2486	100
November			1639	65.5	864	34.5	2503	100
December			1701	65.9	879	34.1	2581	100
2016								
January			1611	65.4	853	34.6	2464	100
February			1630	65.8	849	34.2	2479	100
March			1587	65.7	829	34.3	2416	100
April			1644	66.1	843	33.9	2487	100
May			1629	65.9	843	34.1	2472	100
June			1609	65.4	853	34.7	2461	100
July			1602	65.5	842	34.5	2444	100
August			1610	65.4	851	34.6	2461	100
September			1622	66.3	825	33.7	2446	100
October			1619	65.9	838	34.1	2457	100
November			1607	66.0	829	34.0	2436	100
December			1623	65.1	870	34.9	2493	100
2017								
January			1611	65.3	855	34.7	2466	100
February			1538	64.7	839	35.3	2378	100
March			1524	65.1	817	34.9	2341	100

Time period	LAI Buprenorphine		Methadone		SL Buprenorphine		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
April			1485	63.8	844	36.2	2329	100
May			1575	64.0	888	36.0	2463	100
June			1547	63.0	907	37.0	2455	100
July			1588	63.7	903	36.3	2492	100
August			1578	63.4	911	36.6	2489	100
September			1591	64.0	893	36.0	2484	100
October			1593	63.9	900	36.1	2493	100
November			1579	63.7	901	36.3	2480	100
December			1573	63.3	913	36.7	2485	100
2018								
January			1591	62.8	941	37.2	2532	100
February			1537	63.1	898	36.9	2435	100
March			1564	63.0	918	37.0	2483	100
April			1530	63.0	897	36.9	2427	100
May			1616	63.5	929	36.5	2546	100
June			1606	63.8	909	36.2	2515	100
July			1637	64.3	909	35.7	2546	100
August			1617	63.5	929	36.5	2545	100
September			1570	63.5	901	36.5	2471	100
October			1613	63.7	919	36.3	2532	100
November			1609	64.3	894	35.7	2503	100
December			1651	63.6	945	36.4	2596	100
2019								
January			1606	63.3	931	36.7	2538	100
February			1546	62.9	912	37.1	2458	100
March			1522	63.1	889	36.9	2411	100
April			1551	63.1	907	36.9	2458	100
May			1618	62.8	959	37.2	2577	100
June			1572	62.8	932	37.2	2504	100
July			1553	62.8	921	37.2	2474	100
August			1532	62.8	907	37.2	2439	100
September	16	0.6	1552	62.6	920	37.1	2477*	100
October	29	1.1	1558	61.9	940	37.3	2518*	100
November	32	1.3	1533	62.1	905	36.7	2470	100
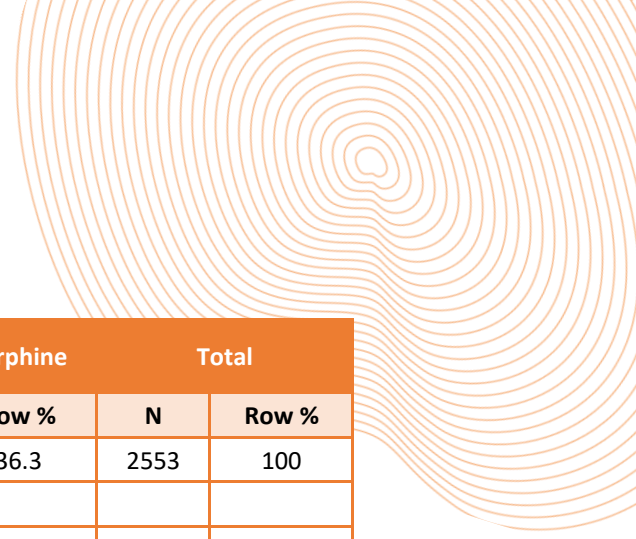
Time period	LAI Buprenorphine		Methadone		SL Buprenorphine		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
December	43	1.7	1585	62.1	926	36.3	2553	100
2020								
January	45	1.8	1570	63.0	877	35.2	2492	100
February	45	1.8	1512	61.9	884	36.2	2441	100
March	92	3.7	1546	61.3	885	35.1	2524	100
April	126	5.1	1481	60.0	861	34.9	2468	100
May	172	6.7	1537	60.2	845	33.1	2555	100
June	177	7.2	1456	59.5	815	33.3	2448	100
July	181	7.1	1528	59.6	856	33.4	2565	100
August	199	7.6	1553	59.6	857	32.8	2608	100
September	223	8.3	1583	59.2	866	32.4	2671	100
October	262	9.6	1597	58.5	870	31.9	2729	100
November	273	9.9	1605	58.3	876	31.8	2754	100
December	284	10.0	1644	58.0	909	32.1	2836	100
2021								
January	305	11.2	1556	57.4	852	31.4	2713	100
February	324	12.2	1491	56.4	829	31.4	2644	100
March	376	14.4	1471	56.3	768	29.4	2615	100
April	399	15.0	1493	56.3	762	28.7	2654	100
May	440	16.2	1516	55.8	760	28.0	2716	100
June	429	16.4	1452	55.3	743	28.3	2623	100
July	443	16.6	1465	54.9	763	28.6	2671	100
August	473	17.3	1501	54.8	764	27.9	2739	100
September	486	17.7	1480	54.1	773	28.2	2739	100
October	504	18.3	1475	53.6	774	28.1	2753	100
November	538	19.9	1405	52.1	755	28.0	2698	100
December	582	20.4	1487	52.1	784	27.5	2853	100
2022								
January	615	22.0	1435	51.4	745	26.7	2795	100
February	592	21.6	1432	52.2	716	26.1	2740	100
March	628	23.7	1345	50.8	674	25.5	2647	100
April	617	23.1	1373	51.4	680	25.5	2670	100
May	672	24.3	1383	50.1	706	25.6	2762	100
June	692	24.9	1399	50.4	687	24.7	2778	100

Time period	LAI Buprenorphine		Methadone		SL Buprenorphine		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
July	729	26.1	1388	49.7	678	24.3	2795	100
August	740	26.3	1405	49.9	669	23.8	2814	100
September	781	27.3	1403	49.1	673	23.6	2858	100
October	838	29.2	1371	47.7	665	23.1	2874	100
November	910	31.2	1344	46.1	660	22.7	2914	100
December	922	31.2	1358	46.0	672	22.8	2951	100

LAI: Long acting injectable, SL: Sublingual

* Due to the calculation of 3 month moving averages the sum of the number of clients on individual OAT medicines does not tally up to the total number of clients on OAT for the first two months since launch of LAI buprenorphine (i.e., September and October 2019)

Table A2. Estimated number of LAI buprenorphine clients per month (WA, 2019-2022)

Time period	LAI Buprenorphine group*				
	Monthly LAIB - high	Monthly LAIB - medium	Monthly LAIB - low	Weekly LAIB - high	Weekly LAIB - low
	n	n	n	n	n
2019					
September		<5	<5	8	<5
October		13	6	6	<5
November		15	7	6	<5
December		21	8	7	6
2020					
January		23	8	9	5
February		26	7	8	<5
March	30	40	32	9	<5
April	25	64	36	7	<5
May	32	75	52	10	<5
June	32	78	54	9	5
July	37	70	63		<5
August	28	82	83		<5
September	28	101	89	10	<5
October	30	115	109	7	<5
November	32	122	110	5	<5
December	32	127	118	<5	<5
2021					
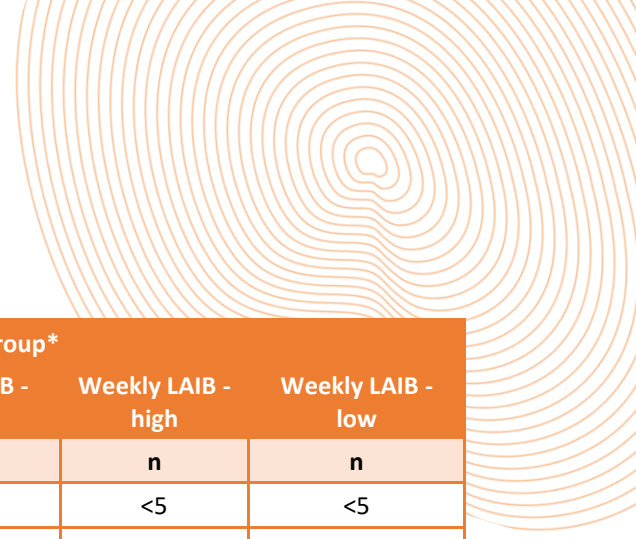
Time period	Monthly LAIB - high	LAI Buprenorphine group*			
		Monthly LAIB - medium	Monthly LAIB - low	Weekly LAIB - high	Weekly LAIB - low
	n	n	n	n	n
January	25	144	131	<5	<5
February	22	160	137	<5	<5
March	18	192	158	<5	<5
April	25	210	156	<5	<5
May	35	226	170	5	<5
June	38	214	169	4	<5
July	35	218	180	5	5
August	33	232	199	5	<5
September	36	238	202	5	5
October	32	249	211	6	5
November	31	278	215	6	7
December	21	326	222	7	6
2022					
January	18	351	232	8	7
February	6	348	225	8	5
March	14	360	236	11	8
April	12	374	214	9	7
May	34	399	219	10	11
June	35	403	228	8	18
July	46	410	242	10	20
August	39	419	244	12	26
September	44	443	254	16	24
October	48	453	290	17	29
November	59	477	320	21	34
December	69	473	318	23	38

* LAIB groups are defined in Table 1

Table A3. Estimated OAT clients per month by remoteness (WA, 2013-2022)

Time period	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
2013											
January	1869	79.9	172	7.3	125	5.3	85	3.6	90	3.8	2341
February	1762	80.4	155	7.1	121	5.5	75	3.4	80	3.6	2192
March	1805	80.2	163	7.2	124	5.5	79	3.5	79	3.5	2250
April	1787	79.8	164	7.3	126	5.6	81	3.6	83	3.7	2241
May	1899	80.0	174	7.3	129	5.4	86	3.6	87	3.7	2375
June	1838	79.9	167	7.2	126	5.5	81	3.5	88	3.8	2299
July	1873	80.0	174	7.4	127	5.4	79	3.4	87	3.7	2340
August	1874	79.6	181	7.7	130	5.5	80	3.4	89	3.8	2353
September	1900	79.1	189	7.9	136	5.7	86	3.6	92	3.8	2404
October	1961	79.4	197	8.0	136	5.5	85	3.5	90	3.6	2470
November	1951	79.3	204	8.3	135	5.5	82	3.3	87	3.5	2460
December	2082	79.8	217	8.3	142	5.4	80	3.1	88	3.4	2609
2014											
January	2040	79.7	212	8.3	143	5.6	78	3.1	85	3.3	2559
February	2004	79.2	212	8.4	143	5.7	81	3.2	89	3.5	2528
March	1919	78.7	214	8.8	141	5.8	77	3.1	87	3.6	2437
April	1935	78.3	220	8.9	145	5.9	78	3.1	91	3.7	2469
May	1983	79.0	213	8.5	148	5.9	79	3.1	88	3.5	2511
June	1978	79.4	199	8.0	147	5.9	80	3.2	89	3.6	2493
July	1979	79.3	201	8.0	145	5.8	81	3.3	89	3.6	2496
August	1977	78.9	202	8.1	149	6.0	82	3.3	95	3.8	2506
September	1982	78.7	204	8.1	152	6.0	85	3.4	96	3.8	2520
October	2000	78.6	205	8.1	158	6.2	82	3.2	98	3.8	2544
November	1955	78.3	212	8.5	154	6.2	81	3.3	93	3.7	2495
December	2022	78.3	221	8.6	160	6.2	83	3.2	97	3.8	2583
2015											
January	1948	78.5	214	8.6	150	6.1	80	3.2	89	3.6	2482
February	1933	78.5	207	8.4	154	6.3	80	3.3	89	3.6	2464
March	1876	78.5	208	8.7	152	6.4	75	3.1	79	3.3	2389
April	1884	78.1	208	8.6	155	6.4	78	3.2	88	3.7	2413
May	1936	78.6	214	8.7	156	6.3	75	3.0	83	3.4	2464
June	1912	78.2	213	8.7	154	6.3	78	3.2	89	3.6	2446
July	1973	78.9	210	8.4	161	6.4	74	3.0	82	3.3	2500

Time period	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
August	1936	78.0	215	8.7	166	6.7	78	3.2	86	3.5	2481
September	1965	78.7	211	8.5	160	6.4	75	3.0	86	3.4	2498
October	1948	78.4	217	8.7	155	6.2	77	3.1	89	3.6	2486
November	1976	78.9	214	8.6	152	6.1	75	3.0	86	3.4	2503
December	2026	78.5	233	9.0	159	6.1	77	3.0	86	3.3	2581
2016											
January	1940	78.7	221	9.0	151	6.1	74	3.0	78	3.2	2464
February	1941	78.3	232	9.3	151	6.1	73	3.0	82	3.3	2479
March	1902	78.7	215	8.9	145	6.0	74	3.1	81	3.3	2416
April	1939	78.0	226	9.1	159	6.4	77	3.1	87	3.5	2487
May	1924	77.8	221	8.9	160	6.5	79	3.2	88	3.6	2472
June	1911	77.6	228	9.3	157	6.4	77	3.1	89	3.6	2461
July	1905	78.0	216	8.9	150	6.1	81	3.3	91	3.7	2444
August	1924	78.2	219	8.9	149	6.1	80	3.2	90	3.6	2461
September	1912	78.1	209	8.5	155	6.3	81	3.3	90	3.7	2446
October	1910	77.7	228	9.3	156	6.3	77	3.1	87	3.5	2457
November	1898	77.9	225	9.2	149	6.1	75	3.1	88	3.6	2436
December	1936	77.7	237	9.5	150	6.0	79	3.2	91	3.7	2493
2017											
January	1930	78.3	224	9.1	148	6.0	76	3.1	87	3.5	2466
February	1866	78.5	215	9.0	147	6.2	72	3.0	78	3.3	2378
March	1850	79.0	208	8.9	146	6.3	65	2.8	72	3.1	2341
April	1829	78.5	210	9.0	143	6.1	69	3.0	78	3.4	2329
May	1925	78.2	220	8.9	153	6.2	77	3.1	88	3.6	2463
June	1929	78.6	213	8.7	145	5.9	78	3.2	90	3.6	2455
July	1965	78.9	213	8.6	150	6.0	76	3.1	87	3.5	2492
August	1974	79.3	213	8.6	144	5.8	73	2.9	84	3.4	2489
September	1971	79.3	213	8.6	145	5.9	72	2.9	82	3.3	2484
October	1978	79.3	215	8.6	148	5.9	73	2.9	79	3.2	2493
November	1973	79.6	208	8.4	142	5.7	74	3.0	82	3.3	2480
December	1967	79.1	211	8.5	147	5.9	76	3.1	84	3.4	2485
2018											
January	2001	79.0	225	8.9	144	5.7	78	3.1	85	3.4	2532
February	1901	78.1	223	9.2	149	6.1	78	3.2	84	3.4	2435
March	1967	79.2	222	9.0	139	5.6	76	3.0	80	3.2	2483
April	1926	79.3	205	8.5	141	5.8	74	3.0	81	3.4	2427
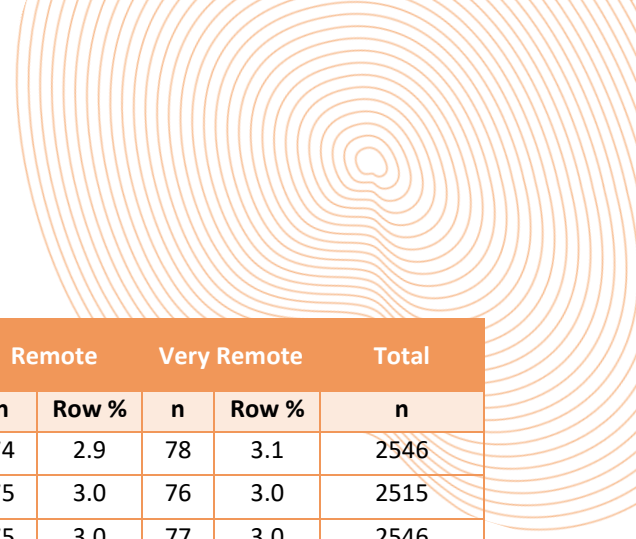
Time period	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
May	2030	79.7	218	8.6	145	5.7	74	2.9	78	3.1	2546
June	2023	80.4	205	8.1	136	5.4	75	3.0	76	3.0	2515
July	2075	81.5	197	7.7	121	4.8	75	3.0	77	3.0	2546
August	2116	83.1	176	6.9	98	3.9	73	2.9	82	3.2	2545
September	2045	82.8	174	7.0	97	3.9	72	2.9	84	3.4	2471
October	2087	82.4	190	7.5	100	4.0	72	2.9	82	3.2	2532
November	2061	82.4	188	7.5	101	4.0	72	2.9	81	3.2	2503
December	2134	82.2	199	7.6	104	4.0	75	2.9	84	3.3	2596
2019											
January	2105	82.9	184	7.3	96	3.8	74	2.9	79	3.1	2538
February	2038	82.9	183	7.5	95	3.9	68	2.8	74	3.0	2458
March	1992	82.6	187	7.8	90	3.8	67	2.8	74	3.1	2411
April	2021	82.2	192	7.8	97	3.9	68	2.8	80	3.3	2458
May	2121	82.3	199	7.7	101	3.9	71	2.8	84	3.3	2577
June	2068	82.6	189	7.6	99	4.0	67	2.7	81	3.2	2504
July	2029	82.0	193	7.8	100	4.0	70	2.8	81	3.3	2474
August	2010	82.4	186	7.6	97	4.0	68	2.8	77	3.2	2439
September	2033	82.1	196	7.9	99	4.0	70	2.8	79	3.2	2477
October	2085	82.8	188	7.5	98	3.9	68	2.7	79	3.1	2518
November	2031	82.2	190	7.7	99	4.0	71	2.9	80	3.2	2470
December	2106	82.5	192	7.5	105	4.1	73	2.9	78	3.1	2553
2020											
January	2059	82.6	192	7.7	98	3.9	70	2.8	74	3.0	2492
February	2022	82.8	186	7.6	96	3.9	65	2.7	72	3.0	2441
March	2088	82.7	196	7.8	96	3.8	69	2.7	75	3.0	2524
April	2033	82.4	197	8.0	99	4.0	67	2.7	74	3.0	2468
May	2108	82.5	207	8.1	97	3.8	70	2.8	73	2.8	2555
June	2036	83.2	183	7.5	96	3.9	64	2.6	69	2.8	2448
July	2144	83.6	187	7.3	97	3.8	65	2.6	71	2.8	2565
August	2170	83.2	193	7.4	102	3.9	69	2.6	74	2.9	2608
September	2220	83.1	204	7.6	101	3.8	70	2.6	75	2.8	2671
October	2275	83.4	205	7.5	101	3.7	72	2.7	75	2.8	2729
November	2301	83.6	209	7.6	99	3.6	71	2.6	75	2.7	2754
December	2365	83.4	212	7.5	106	3.7	76	2.7	78	2.7	2836
2021											
January	2272	83.7	196	7.2	100	3.7	71	2.6	75	2.8	2713

Time period	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
February	2223	84.1	185	7.0	96	3.6	65	2.5	74	2.8	2644
March	2199	84.1	187	7.1	91	3.5	65	2.5	74	2.8	2615
April	2228	84.0	186	7.0	98	3.7	66	2.5	75	2.8	2654
May	2274	83.7	190	7.0	102	3.8	72	2.6	78	2.9	2716
June	2202	83.9	180	6.9	98	3.7	68	2.6	76	2.9	2623
July	2220	83.1	196	7.3	106	4.0	70	2.6	79	3.0	2671
August	2287	83.5	193	7.1	109	4.0	69	2.5	81	3.0	2739
September	2280	83.3	190	6.9	117	4.3	70	2.6	81	2.9	2739
October	2324	84.4	178	6.5	104	3.8	68	2.5	79	2.9	2753
November	2285	84.7	169	6.3	104	3.9	65	2.4	74	2.8	2698
December	2437	85.4	177	6.2	100	3.5	64	2.2	75	2.6	2853
2022											
January	2367	84.7	176	6.3	106	3.8	69	2.5	77	2.7	2795
February	2308	84.2	181	6.6	103	3.8	68	2.5	80	2.9	2740
March	2237	84.5	169	6.4	99	3.7	65	2.4	77	2.9	2647
April	2268	84.9	170	6.4	93	3.5	63	2.4	76	2.9	2670
May	2347	85.0	182	6.6	95	3.4	62	2.3	76	2.7	2762
June	2356	84.8	184	6.6	96	3.4	66	2.4	76	2.7	2778
July	2371	84.8	187	6.7	98	3.5	62	2.2	78	2.8	2795
August	2400	85.3	177	6.3	98	3.5	64	2.3	74	2.6	2814
September	2444	85.5	180	6.3	94	3.3	61	2.1	78	2.7	2858
October	2452	85.3	185	6.4	99	3.5	63	2.2	74	2.6	2874
November	2481	85.1	191	6.5	96	3.3	65	2.2	81	2.8	2914
December	2514	85.2	196	6.6	103	3.5	63	2.1	75	2.6	2951

Table A4. Estimated OAT clients per month by IRSAD quintile (WA, 2013-2022)

Time period	1 (most disadvantaged)		2		3		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
2013											
January	353	15.1	452	19.3	419	17.9	423	18.1	694	29.6	2341
February	331	15.1	429	19.6	390	17.8	398	18.2	644	29.4	2192
March	339	15.1	432	19.2	392	17.4	414	18.4	673	29.9	2250
April	329	14.7	423	18.9	385	17.2	425	19.0	680	30.3	2241
May	344	14.5	438	18.5	393	16.6	459	19.3	740	31.1	2375
June	325	14.1	432	18.8	389	16.9	445	19.4	708	30.8	2299
July	332	14.2	446	19.0	392	16.8	463	19.8	708	30.2	2340
August	324	13.8	461	19.6	397	16.9	471	20.0	700	29.8	2353
September	331	13.8	473	19.7	399	16.6	486	20.2	714	29.7	2404
October	328	13.3	493	20.0	412	16.7	492	19.9	745	30.2	2470
November	328	13.3	485	19.7	416	16.9	497	20.2	733	29.8	2460
December	336	12.9	510	19.6	449	17.2	540	20.7	775	29.7	2609
2014											
January	333	13.0	506	19.8	443	17.3	531	20.8	746	29.1	2559
February	329	13.0	504	19.9	441	17.5	531	21.0	723	28.6	2528
March	323	13.2	496	20.3	435	17.8	499	20.5	685	28.1	2437
April	323	13.1	493	20.0	451	18.3	501	20.3	701	28.4	2469
May	331	13.2	513	20.4	462	18.4	496	19.8	708	28.2	2511
June	328	13.2	506	20.3	448	18.0	496	19.9	714	28.6	2493
July	335	13.4	520	20.8	450	18.0	495	19.8	696	27.9	2496
August	329	13.1	516	20.6	445	17.7	488	19.5	728	29.1	2506
September	334	13.3	515	20.5	454	18.0	490	19.5	726	28.8	2520
October	342	13.4	526	20.7	456	17.9	486	19.1	734	28.8	2544
November	332	13.3	508	20.4	461	18.5	488	19.6	706	28.3	2495
December	351	13.6	525	20.3	472	18.3	501	19.4	734	28.4	2583
2015											
January	320	12.9	500	20.1	455	18.3	490	19.7	716	28.9	2482
February	322	13.0	497	20.2	454	18.4	472	19.2	718	29.1	2464
March	292	12.2	497	20.8	442	18.5	449	18.8	710	29.7	2389
April	303	12.6	497	20.6	447	18.5	448	18.6	718	29.7	2413
May	314	12.7	514	20.9	456	18.5	461	18.7	718	29.1	2464
June	316	12.9	511	20.9	457	18.7	457	18.7	704	28.8	2446

Time period	1 (most disadvantaged)		2		3		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
July	324	13.0	514	20.6	460	18.4	471	18.8	731	29.2	2500
August	319	12.9	507	20.4	458	18.5	473	19.1	724	29.2	2481
September	327	13.1	499	20.0	467	18.7	482	19.3	723	28.9	2498
October	326	13.1	492	19.8	476	19.1	483	19.4	710	28.5	2486
November	323	12.9	490	19.6	472	18.9	480	19.2	737	29.5	2503
December	325	12.6	512	19.9	485	18.8	507	19.6	751	29.1	2581
2016											
January	309	12.5	488	19.8	452	18.3	490	19.9	726	29.5	2464
February	307	12.4	486	19.6	463	18.7	493	19.9	730	29.4	2479
March	300	12.4	463	19.2	442	18.3	480	19.9	730	30.2	2416
April	308	12.4	485	19.5	466	18.7	492	19.8	737	29.6	2487
May	307	12.4	497	20.1	450	18.2	503	20.3	716	29.0	2472
June	311	12.6	499	20.3	453	18.4	497	20.2	702	28.5	2461
July	306	12.5	498	20.4	442	18.1	502	20.6	695	28.4	2444
August	310	12.6	496	20.1	449	18.2	507	20.6	700	28.4	2461
September	297	12.1	492	20.1	436	17.8	514	21.0	707	28.9	2446
October	298	12.1	497	20.2	442	18.0	522	21.2	699	28.4	2457
November	296	12.1	487	20.0	432	17.7	510	20.9	711	29.2	2436
December	299	12.0	504	20.2	452	18.1	515	20.6	723	29.0	2493
2017											
January	298	12.1	496	20.1	436	17.7	505	20.5	732	29.7	2466
February	287	12.1	472	19.9	421	17.7	493	20.7	704	29.6	2378
March	291	12.4	467	19.9	403	17.2	484	20.7	696	29.7	2341
April	290	12.4	461	19.8	409	17.6	473	20.3	697	29.9	2329
May	299	12.2	498	20.2	435	17.7	497	20.2	733	29.8	2463
June	299	12.2	497	20.3	432	17.6	489	19.9	737	30.0	2455
July	304	12.2	511	20.5	437	17.5	505	20.3	736	29.5	2492
August	311	12.5	522	21.0	432	17.4	507	20.4	717	28.8	2489
September	310	12.5	530	21.3	433	17.4	501	20.2	711	28.6	2484
October	310	12.4	544	21.8	432	17.3	500	20.0	707	28.4	2493
November	301	12.1	534	21.5	432	17.4	497	20.1	716	28.9	2480
December	300	12.1	519	20.9	430	17.3	513	20.6	723	29.1	2485
2018											
January	302	11.9	533	21.0	441	17.4	521	20.6	735	29.0	2532
February	297	12.2	524	21.5	426	17.5	493	20.2	695	28.5	2435

Time period	1 (most disadvantaged)		2		3		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
March	301	12.1	541	21.8	437	17.6	500	20.1	703	28.3	2483
April	301	12.4	509	21.0	425	17.5	492	20.3	700	28.8	2427
May	308	12.1	535	21.0	449	17.7	510	20.0	743	29.2	2546
June	298	11.8	517	20.6	482	19.2	504	20.0	715	28.4	2515
July	299	11.7	525	20.6	505	19.8	506	19.9	712	27.9	2546
August	305	12.0	496	19.5	509	20.0	517	20.3	719	28.3	2545
September	310	12.6	477	19.3	480	19.4	492	19.9	711	28.8	2471
October	309	12.2	483	19.1	493	19.5	510	20.2	737	29.1	2532
November	299	11.9	486	19.4	498	19.9	501	20.0	720	28.7	2503
December	303	11.7	498	19.2	525	20.2	539	20.7	732	28.2	2596
2019											
January	303	11.9	487	19.2	513	20.2	515	20.3	721	28.4	2538
February	290	11.8	467	19.0	504	20.5	507	20.6	691	28.1	2458
March	283	11.7	467	19.4	491	20.4	485	20.1	686	28.4	2411
April	287	11.7	470	19.1	518	21.1	506	20.6	677	27.5	2458
May	305	11.8	495	19.2	523	20.3	538	20.9	716	27.8	2577
June	299	11.9	482	19.2	517	20.6	512	20.4	695	27.8	2504
July	302	12.2	478	19.3	488	19.7	510	20.6	695	28.1	2474
August	302	12.4	489	20.0	486	19.9	488	20.0	675	27.7	2439
September	312	12.6	496	20.0	466	18.8	513	20.7	689	27.8	2477
October	317	12.6	499	19.8	481	19.1	508	20.2	713	28.3	2518
November	298	12.1	475	19.2	481	19.5	502	20.3	714	28.9	2470
December	308	12.1	484	18.9	507	19.9	517	20.2	738	28.9	2553
2020											
January	283	11.4	461	18.5	495	19.9	495	19.9	758	30.4	2492
February	292	12.0	450	18.4	482	19.7	491	20.1	726	29.7	2441
March	289	11.5	461	18.3	509	20.2	507	20.1	758	30.0	2524
April	280	11.3	467	18.9	498	20.2	520	21.1	704	28.5	2468
May	279	10.9	476	18.6	523	20.5	529	20.7	749	29.3	2555
June	264	10.8	454	18.5	486	19.9	502	20.5	742	30.3	2448
July	285	11.1	485	18.9	510	19.9	504	19.6	781	30.4	2565
August	283	10.9	482	18.5	502	19.2	518	19.9	824	31.6	2608
September	283	10.6	498	18.6	530	19.8	544	20.4	816	30.5	2671
October	279	10.2	483	17.7	544	19.9	560	20.5	864	31.6	2729
November	284	10.3	505	18.3	548	19.9	552	20.0	866	31.4	2754
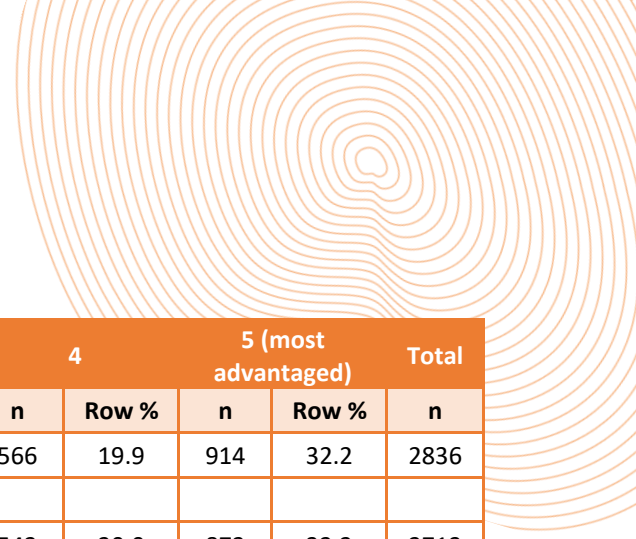
Time period	1 (most disadvantaged)		2		3		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n
December	290	10.2	510	18.0	557	19.7	566	19.9	914	32.2	2836
2021											
January	284	10.5	496	18.3	519	19.1	542	20.0	872	32.2	2713
February	272	10.3	472	17.8	523	19.8	539	20.4	837	31.7	2644
March	284	10.8	472	18.0	500	19.1	532	20.3	828	31.7	2615
April	287	10.8	473	17.8	529	20.0	528	19.9	836	31.5	2654
May	289	10.6	478	17.6	527	19.4	543	20.0	879	32.4	2716
June	272	10.4	463	17.7	524	20.0	512	19.5	852	32.5	2623
July	281	10.5	483	18.1	516	19.3	530	19.8	861	32.2	2671
August	296	10.8	487	17.8	531	19.4	532	19.4	893	32.6	2739
September	298	10.9	478	17.5	531	19.4	524	19.1	906	33.1	2739
October	291	10.6	467	17.0	541	19.6	521	18.9	933	33.9	2753
November	292	10.8	455	16.9	539	20.0	519	19.2	894	33.1	2698
December	305	10.7	500	17.5	568	19.9	545	19.1	935	32.8	2853
2022											
January	295	10.6	490	17.5	546	19.5	546	19.5	918	32.8	2795
February	286	10.4	465	17.0	548	20.0	533	19.5	907	33.1	2740
March	286	10.8	431	16.3	516	19.5	523	19.7	891	33.7	2647
April	294	11.0	430	16.1	520	19.5	524	19.6	902	33.8	2670
May	307	11.1	470	17.0	537	19.4	516	18.7	931	33.7	2762
June	294	10.6	457	16.5	558	20.1	523	18.8	947	34.1	2778
July	305	10.9	482	17.2	558	20.0	519	18.6	931	33.3	2795
August	303	10.8	472	16.8	557	19.8	537	19.1	944	33.6	2814
September	312	10.9	474	16.6	566	19.8	532	18.6	974	34.1	2858
October	308	10.7	461	16.0	568	19.8	537	18.7	1000	34.8	2874
November	304	10.4	492	16.9	553	19.0	550	18.9	1015	34.8	2914
December	313	10.6	495	16.8	578	19.6	554	18.8	1010	34.2	2951

IRSAD: Index of Relative Socioeconomic Advantage and Disadvantage

*Australia Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016. ABS: Canberra; 2018.

Table A5. Estimated OAT clients per month by setting (WA, 2013-2022)

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Other (incl. prisons)	
	n	Row %	n	Row %	n	Row %	n	Row %
2013								
January	2325	99.3	8	0.3	8	0.3	0	
February	2174	99.2	13	0.6	5	0.2		
March	2226	98.9	21	0.9	4	0.2		
April	2209	98.6	27	1.2	5	0.2		
May	2340	98.5	30	1.3	5	0.2		
June	2268	98.6	25	1.1	6	0.3		
July	2311	98.7	24	1.0	6	0.2		
August	2318	98.5	26	1.1	8	0.3	<5	
September	2366	98.4	26	1.1	9	0.4	<5	
October	2428	98.3	29	1.2	10	0.4	<5	
November	2424	98.5	26	1.0	8	0.3	<5	
December	2569	98.5	31	1.2	8	0.3	<5	
2014								
January	2521	98.5	30	1.2	6	0.3		
February	2490	98.5	31	1.2	6	0.2	<5	
March	2397	98.4	31	1.3	6	0.3	<5	
April	2430	98.4	30	1.2	5	0.2	<5	
May	2471	98.4	30	1.2	6	0.2	<5	
June	2461	98.7	25	1.0	5	0.2	<5	
July	2459	98.5	27	1.1	8	0.3	<5	
August	2472	98.7	24	1.0	7	0.3	<5	
September	2482	98.5	29	1.2	5	0.2	<5	
October	2510	98.7	26	1.0	5	0.2	<5	
November	2456	98.4	33	1.3	5	0.2	<5	
December	2544	98.5	31	1.2	7	0.3	<5	
2015								
January	2448	98.6	29	1.2	<5		<5	
February	2433	98.7	26	1.1	<5		<5	
March	2361	98.8	23	1.0	<5		<5	
April	2383	98.8	23	1.0	<5		<5	
May	2438	98.9	21	0.8	<5			
June	2419	98.9	20	0.8	<5		<5	

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Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Other (incl. prisons)	
	n	Row %	n	Row %	n	Row %	n	Row %
July	2473	98.9	23	0.9			<5	
August	2449	98.7	28	1.1	<5		<5	
September	2467	98.7	28	1.1	<5		<5	
October	2450	98.5	30	1.2	<5		<5	
November	2470	98.7	27	1.1	5	0.2	<5	
December	2548	98.7	26	1.0	5	0.2	<5	
2016								
January	2434	98.8	23	1.0	<5		<5	
February	2442	98.5	29	1.2	6	0.2	<5	
March	2376	98.4	33	1.4	<5		<5	
April	2449	98.5	33	1.3	5	0.2		
May	2440	98.7	27	1.1	<5		<5	
June	2432	98.8	23	0.9	6	0.2	<5	
July	2416	98.9	19	0.8	7	0.3	<5	
August	2437	99.0	16	0.6	6	0.2	<5	
September	2423	99.1	16	0.7	5	0.2	<5	
October	2434	99.1	18	0.7	<5			
November	2411	99.0	21	0.9	<5		<5	
December	2467	99.0	23	0.9	<5		<5	
2017								
January	2436	98.8	28	1.1	<5		<5	
February	2354	99.0	21	0.9	<5		<5	
March	2318	99.0	22	0.9	<5		<5	
April	2309	99.1	19	0.8	<5		<5	
May	2434	98.9	25	1.0	<5		<5	
June	2427	98.9	24	1.0			<5	
July	2467	99.0	21	0.8	<5		<5	
August	2470	99.2	18	0.7	<5			
September	2463	99.2	19	0.8	<5		<5	
October	2470	99.1	22	0.9	<5		<5	
November	2455	99.0	23	0.9	<5		<5	
December	2463	99.1	21	0.8	<5		<5	
2018								
January	2507	99.0	22	0.9	<5		<5	
February	2407	98.9	25	1.0	<5		<5	

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Other (incl. prisons)	
	n	Row %	n	Row %	n	Row %	n	Row %
March	2458	99.0	22	0.9	<5		<5	
April	2402	99.0	22	0.9	<5		<5	
May	2524	99.1	18	0.7	<5			
June	2492	99.1	19	0.8	<5			
July	2527	99.2	18	0.7	<5		<5	
August	2523	99.1	20	0.8	<5		<5	
September	2447	99.0	19	0.8	<5		<5	
October	2505	99.0	20	0.8	5	0.2	<5	
November	2476	98.9	17	0.7	9	0.4	<5	
December	2571	99.0	15	0.6	9	0.4		
2019								
January	2516	99.1	14	0.6	7	0.3		
February	2439	99.2	16	0.6	<5		<5	
March	2390	99.1	20	0.8			<5	
April	2434	99.0	22	0.9	<5		<5	
May	2551	99.0	21	0.8	<5		<5	
June	2481	99.1	19	0.8	<5			
July	2453	99.2	17	0.7	<5		<5	
August	2424	99.4	13	0.5	<5		<5	
September	2453	99.0	13	0.5	10	0.4	<5	
October	2475	98.3	14	0.6	27	1.1	<5	
November	2413	97.7	16	0.7	39	1.6	<5	
December	2486	97.4	18	0.7	48	1.9		
2020								
January	2425	97.3	15	0.6	51	2.0	<5	
February	2377	97.4	13	0.5	50	2.1	<5	
March	2439	96.7	9	0.4	75	3.0		
April	2379	96.4	9	0.4	79	3.2	<5	
May	2451	95.9	11	0.4	92	3.6		
June	2352	96.1	14	0.6	81	3.3	<5	
July	2462	96.0	16	0.6	85	3.3	<5	
August	2502	95.9	16	0.6	90	3.4		
September	2553	95.6	14	0.5	102	3.8	<5	
October	2594	95.0	15	0.6	119	4.4	<5	
November	2612	94.8	16	0.6	124	4.5	<5	

| Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Other (incl. prisons)	
	n	Row %	n	Row %	n	Row %	n	Row %
December	2696	95.0	17	0.6	120	4.2	<5	
2021								
January	2581	95.1	13	0.5	115	4.2	<5	
February	2522	95.4	10	0.4	110	4.1		
March	2485	95.0	7	0.3	123	4.7	<5	
April	2528	95.3	10	0.4	115	4.3	<5	
May	2564	94.4	14	0.5	135	5.0	<5	
June	2480	94.5	16	0.6	125	4.8	<5	
July	2520	94.4	13	0.5	135	5.1	<5	
August	2597	94.8	9	0.3	130	4.7	<5	
September	2590	94.6	10	0.4	133	4.8	6	0.2
October	2586	93.9	9	0.3	150	5.4	8	0.3
November	2516	93.3	9	0.3	156	5.8	16	0.6
December	2660	93.3	8	0.3	160	5.6	24	0.8
2022								
January	2588	92.6	10	0.3	161	5.8	37	1.3
February	2533	92.5	10	0.4	153	5.6	43	1.6
March	2432	91.9	8	0.3	159	6.0	48	1.8
April	2455	91.9	9	0.3	151	5.7	55	2.1
May	2533	91.7	7	0.3	157	5.7	64	2.3
June	2538	91.4	7	0.3	161	5.8	71	2.6
July	2550	91.2	7	0.3	157	5.6	81	2.9
August	2566	91.2	10	0.4	164	5.8	75	2.7
September	2621	91.7	12	0.4	149	5.2	77	2.7
October	2627	91.4	14	0.5	161	5.6	73	2.5
November	2633	90.4	15	0.5	180	6.2	86	3.0
December	2643	89.6	18	0.6	190	6.4	100	3.4

Table A6. Estimated OAT clients per month by medicine and setting (WA, 2013-2022)

Time period	Community Pharmacy			Clinics & Medical Centres			Other (incl. prisons)	
	LAI bup	SL bup	Methadone	LAI bup	SL bup	Methadone	LAI bup	SL bup
	n	n	n	n	n	n	n	n
2013								
January		638	1687		<5	5		<5
February		600	1573		<5			
March		607	1619		<5	<5		
April		604	1606		<5	<5		
May		656	1684		<5	<5		
June		645	1623		<5	<5		
July		671	1640		<5	<5		
August		666	1652		<5	7		<5
September		701	1665		<5	8		<5
October		756	1672		<5	8		<5
November		783	1641		<5	6		<5
December		846	1723		<5	7		<5
2014								
January		833	1688		<5	6		
February		829	1661		<5	5		<5
March		805	1592		<5	5		<5
April		807	1623		<5	4		<5
May		828	1643		<5	6		<5
June		819	1641		<5	5		<5
July		819	1640			7		<5
August		815	1657		<5	7		<5
September		835	1647		<5			<5
October		842	1668		<5	7		<5
November		825	1630		<5	5		<5
December		859	1685		<5	<5		<5
2015								
January		828	1620		<5			<5
February		825	1608		<5	<5		<5
March		791	1570		<5	<5		<5
April		814	1569		<5	<5		<5
May		835	1603		<5			

Time period	Community Pharmacy			Clinics & Medical Centres			Other (incl. prisons)	
	LAI bup	SL bup	Methadone	LAI bup	SL bup	Methadone	LAI bup	SL bup
	n	n	n	n	n	n	n	n
June		818	1602		<5	<5		<5
July		835	1638					<5
August		835	1613			<5		<5
September		857	1610		<5	<5		<5
October		844	1606		<5	<5		<5
November		851	1618		<5	<5		<5
December		868	1680		<5			<5
2016								
January		841	1593		<5	<5		<5
February		833	1609		<5	<5		<5
March		814	1562		<5			<5
April		830	1618		<5	5		
May		833	1607		<5	6		<5
June		842	1590					<5
July		830	1586		<5	<5		<5
August		839	1599		<5	<5		<5
September		813	1611		<5	<5		<5
October		826	1609		<5	<5		
November		819	1592		<5	<5		<5
December		863	1604		<5	<5		<5
2017								
January		848	1589		8			<5
February		832	1523		<5			<5
March		808	1510		<5			<5
April		835	1474		<5			<5
May		875	1560		<5			<5
June		894	1533		<5			<5
July		891	1576		<5			<5
August		904	1566		<5			
September		885	1578		<5			<5
October		890	1580		<5			<5
November		890	1565		<5			<5
December		903	1560		<5			<5
2018								

Time period	Community Pharmacy			Clinics & Medical Centres			Other (incl. prisons)	
	LAI bup	SL bup	Methadone	LAI bup	SL bup	Methadone	LAI bup	SL bup
	n	n	n	n	n	n	n	n
January		931	1576			<5		<5
February		887	1520		<5	<5		<5
March		907	1550		<5			<5
April		885	1516		<5	<5		<5
May		921	1603		<5	<5		
June		902	1590		<5			
July		903	1624		<5			<5
August		919	1604		<5	<5		<5
September		889	1557		<5	<5		<5
October		907	1598		<5	<5		<5
November		885	1591		<5	9		<5
December		938	1634		<5	8		
2019								
January		925	1591		<5			
February		903	1536		<5			<5
March		880	1510					<5
April		897	1537		<5			<5
May		950	1601		<5	9		<5
June		924	1557		<5			
July		914	1539		<5	5		<5
August		901	1523		<5	<5		<5
September		913	1539	16	<5	<5		<5
October		932	1543	29	<5	7		<5
November		897	1516	32	<5	7		<5
December		917	1569	43	<5	5		
2020								
January		870	1555	45	<5	5		<5
February		878	1499	45	<5			<5
March	75	882	1533	67	<5	8		
April	76	857	1471	75	<5	7		<5
May	84	840	1527	88	<5			
June	97	809	1446	80	<5	<5		<5
July	103	850	1510	79		6		<5
August	115	851	1535	83	<5			

Time period	Community Pharmacy			Clinics & Medical Centres			Other (incl. prisons)	
	LAI bup	SL bup	Methadone	LAI bup	SL bup	Methadone	LAI bup	SL bup
	n	n	n	n	n	n	n	n
September	126	860	1567	96	<5			<5
October	150	863	1580	111	<5	14		<5
November	155	869	1588	116	<5	14	<5	<5
December	178	900	1618	104	<5	16		<5
2021								
January	198	842	1542	106	<5			<5
February	222	821	1479	101	<5			
March	259	763	1463	117		14		<5
April	292	756	1480	107	<5	16		<5
May	317	751	1497	122	<5	12		<5
June	312	732	1435	116	<5	8		<5
July	317	754	1449	124	<5	11		<5
August	349	757	1490	122	<5			<5
September	357	765	1468	122	<5	11	9	<5
October	357	767	1462	140	<5	14	9	<5
November	380	748	1388	142	<5	13	15	<5
December	410	777	1473	150	<5		21	<5
2022								
January	429	737	1421	152	<5	14	33	<5
February	404	708	1421	148			39	5
March	428	668	1336	154	<5		45	<5
April	417	675	1363	146	<5	14	53	<5
May	458	700	1375	151	<5	10	62	<5
June	466	682	1390	156	<5	5	69	<5
July	503	673	1374	147	<5	10	78	<5
August	514	663	1389	153	<5	10	73	<5
September	568	666	1386	138	<5		74	<5
October	606	657	1364	160	<5	10	70	<5
November	650	652	1331	174	<5	5	83	<5
December	638	662	1344	184	<5	5	97	<5
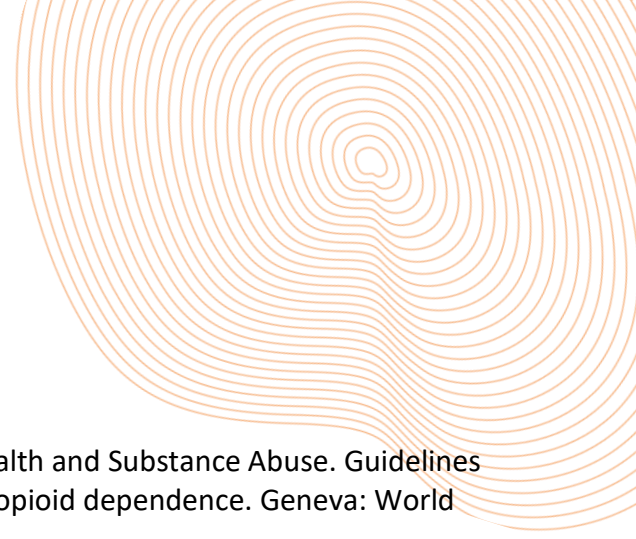
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